E06101

THE
SKIN DISEASES OF INFANCY
AND
EARLY LIFE.

THE SKIN DISEASES

OF

INFANCY AND EARLY LIFE.

BY

C. M. CAMPBELL, M.D., C.M. EDIN.,

ETC.

LONDON:
BAILLIÈRE, TINDALL, AND COX,
KING WILLIAM STREET, STRAND.
1889.

THIS LITTLE MANUAL

IS DEDICATED

TO

PATRICK HERON WATSON,

LL.D., M.D., F.R.C.S.E., F.R.S.E.,

Surgeon in Ordinary to Her Majesty the Queen in Scotland, Ex-President of the Royal College of Surgeons, Edinburgh, Consulting Surgeon to the Royal Infirmary, etc.,

BY ONE OF HIS FORMER HOUSE SURGEONS,

AS A TOKEN OF APPRECIATION OF
VALUED CLINICAL TEACHING, AND BRILLIANT EXAMPLE,
DURING HIS PERIOD OF RESIDENCE IN HOSPITAL,
AND OF
GRATITUDE FOR NEVER-FAILING KINDNESS AND FRIENDSHIP
DURING THE TWENTY YEARS THAT HAVE SINCE ELAPSED.

CONTENTS.

HAPTER PAGE
I. INTRODUCTORY - - - - - 1

II. SKIN DISEASES INITIATED IN UTERO:
Ichthyosis Congenita - - - - 6
Leioderma, or Glossy Skin - - - 10
Zeroderma - - - - - - 11
Sclerema Neonatorum - - - - 12
Vascular Nævus - - - - - 13
Nævi - - - - - - 14
Cardiac Cyanosis - - - - - 14

III. ERUPTIVE FEVERS:
Variola, or Small Pox - - - - 17
Varicella, or Chicken Pox - - - 19
Morbilli, or Measles - - - - 20
Rubeola, or German Measles - - - 22
Scarlatina Simplex - - - - 23
" Anginosa - - - - 25
" Maligna - - - - 26
Miliaria - - - - - - 28
Erysipelas - - - - - - 30

IV. CHRONIC NON-FEBRILE BACTERIAL DISEASES:
Pemphigus Contagiosus - - - - 37

CHAPTER PAGE
Impetigo - - - - - - 39
Molluscum Contagiosum - - - - 41
Lupus - - - - - - 42
Scrofuloderma - - - - - 49
Syphilis - - - - - - 54

V. DISEASES CHARACTERIZED BY CAPILLARY FLUX IN THE GENERAL TISSUES OF THE DERMA:

Erythema Simplex - - - - 69
Intertrigo - - - - - - 71
Strophulus - - - - - 72
Erythema Pernio, or Chilblain - - - 73
Paratrimma, or Bed Sore - - - - 76
Decubitus - - - - - - 76
Erythema Punctatum - - - - 78
Erythema Multiforme - - - - 80
Progressive Hyperplastic Erythema - - 82
Eczema - - - - - - 85
Acute Infantile Eczema - - - - 87
Chronic Infantile Eczema - - - 95
Dermatitis - - - - - - 96
Burns and Scalds - - - - - 98
Phlegmon, or Cellulitis - - - - 99
Furunculus, or Boil - - - - 101
Ecthyma - - - - - - 103

VI. DISEASES INITIATED BY LESIONS OF THE EPIDERMIS AND ITS INVOLUTIONS:

Psoriasis - - - - - - 106
Pityriasis - - - - - - 114
Onychia - - - - - - 116

CHAPTER PAGE
Lichen Simplex - - - - - 117
„ Circumscriptus - - - - 117
„ Marginatus - - - 118
„ Pilaris - - - - - 119
„ Planus - - - - - 119
„ Ruber - - - - - 119
Seborrhœa - - - - - 120
Comedo - - - - - - 122
Acne - - - - - - 123
Sudamina - - - - - - 128
Ephidrosis - - - - - 129
Hyperidrosis - - - - 129
Dysidrosis - - - - - 129
Bromidrosis - - - - - 129

VII. NEUROSES :

Pruritus - - - - - - 130
Urticaria - - - - - - 132
Lichen Urticatus - - - - - 135
„ Tropicus, or Prickly Heat - - 135
Prurigo - - - - - - 136
Herpes - - - - - - 139
Zoster, or Zona - - - - - 141
Herpes Iris - - - - - 141
Leucoderma - - - - - 142
Alopecia Areata - - - - - 144

III. PARASITES—ANIMAL AND VEGETABLE :

Pediculus Capitis, or Head Louse - - 150
„ Vestimenti, or Body Louse - - 152
„ Pubis, or Crab Louse - - - 154

CHAPTER PAGE
Acarus Scabiei, or Itch Mite - - - 155
Pulex Irritans, or Common Flea - - - 160
„ Penetrans, Chigoe, or Jigger - - 161
Ixodes, or Tick - - - - - 161
Oxyuris Vermicularis - - - - 162
Dermatomycosis Achorina, Achorion Schönleinii, or Tinea Favosa - - - - 163
Trichophyton Tinea Tonsurans - - - 168
„ „ Circinata - - - 169
Dermatomycosis Furfuracea, Microsporon Furfur, or Tinea Versicolor - - - 174
Microsporon Audouini - - - - 175
IX. FORMULÆ AND NOTES UPON THERAPEUTIC AGENTS - - - - - - 176

PREFACE.

THE busy practitioner is frequently called upon to diagnose and treat, offhand, some skin manifestation which has caused sudden alarm in a household; to decide whether that alarm be well or ill-founded; and whether the affection be, or be not, contagious. It is not too much to say that a professional reputation may be seriously marred if subsequent events prove such an opinion to have been inaccurate.

While the bulk and price of the more recent standard works militates against their being thoroughly studied by those not especially interested in dermatology, the various epitomes, and remarks in treatises on the general practice of medicine or surgery, are often too bald to afford any reliable or practically serviceable information to the busy family attendant.

It has been my endeavour in the following pages to steer clear of both these objections, and while recording the most notable recent views of various authors on etiology, pathology, clinical evidences and methods of treatment, to emphasize those only which have commended themselves as of practical value, in a somewhat extensive and extended personal experience.

The work has, as far as possible, been limited to consideration of those diseases which are commonly encountered in infancy and early life, but it has been found impossible to altogether ignore some of the types which are more characteristic of later years.

A chapter has been devoted to the Exanthematous Fevers.

Therapeutics are considered generally under the heading of each disease, but, for greater convenience of reference and comparison, remedies and methods of treatment are formulated and systematized in the concluding chapter.

37, QUEEN ANNE STREET,
CAVENDISH SQUARE, W.,
January, 1889.

SKIN DISEASES
OF
INFANCY AND EARLY LIFE.

CHAPTER I.

INTRODUCTORY.

ALTHOUGH the skin diseases of infancy and early life can, for the most part, scarcely be regarded as essentially different from those found in later years, they yet present certain features which entitle them to be studied clinically by themselves. There are some, indeed, which are strictly congenital, and others which are so much more common in the young than in the adult or aged, that we may rightly regard them as diseases of early life. On the other hand, there are not a few diseases which either never occur, or are so rare in early life, that we may safely exclude them from our thoughts in framing a diagnosis. Moreover, we often find the skin in infancy striking the key-note of many diatheses which may affect the individual in after years, perhaps for life, and acting as a pathological danger-signal to the intelligent observer.

For example, when we see an infant with fine flaxen hair, long eye-lashes, blue eyes, and a delicate skin which easily chafes, we know that all the epithelial structures of its body are probably on a par with its weak, prettily transparent epidermis; that its teeth will probably decay very early; that it will be prone to catarrh, either of the air-passages or the intestines, and that in its case such catarrhs will be of graver import than in the case of one with stronger epithelial structures; that it will be liable to disorders of the kidney, and suffer generally from extremes of heat and cold. For all which reasons we may profitably take note of the skin of the infant and the adolescent, and the lesions affecting them, apart from the consideration of skin diseases in general.

And here we may well direct our attention to what takes place at birth, when the whole surface of the skin undergoes a sudden change of environment, from a fluid medium—the liquor amnii—at a temperature of 99° or 100° F., to an aerial one many degrees lower. Can we wonder that a weak and vulnerable epidermis is injuriously affected by such a change, the more so that, instead of being enveloped in a soft, unctuous covering, the *vernix caseosa,* and being touched only by a smooth slippery membrane—the *amnion*—the new-born infant is vigorously rubbed and scrubbed with soap and water by an energetic monthly nurse, and is finally rolled in flannel more or less hard and hirsute? The wonder rather is that so many infants' skins successfully withstand the trying ordeal. Still a great many do resent it, and so we often find their skins running on to Strophulus, Urticaria, or Eczema.

I am a strong advocate of personal cleanliness, but cannot shut my eyes to two facts: first, that the orthodox English mode of washing and dressing the newly born is eminently calculated to irritate and over-excite the skin; and, secondly, that where infants, as in Norway, are never washed at all for a long period after birth, they do not, so far as I am aware, suffer in consequence, either in their skins or other organs.

To fully understand the objections to the orthodox mode, we must consider one or two physiological points.

In my lectures on the Physiology of the Skin, I point out that many recent investigators—notably Unna—contend that the sweat, or more appropriately, the coil glands, exude an oily substance, and that the watery fluid is added to it in that portion of the coil ducts which passes through the prickle-cell layer of the epidermis. It has been demonstrated by Meissner that in this region the duct loses its lining membrane, and consists of a mere passage through the prickle-cell layer, so that any increased static pressure of the inter-cellular fluid can find relief, and the overflow fluid escape through the duct or pore to the surface. Now these coil glands are relatively much more highly developed during the last three months of the fœtus *in utero* than are the sebaceous glands, which are embryologically connected with hair-lubrication, and have therefore but little to do, and, like the hairs, are but rudimentary even at birth.

It is pretty obvious, then, that the function of the active fœtal coil glands is the exudation in whole or in great part of the *vernix caseosa.*

The remainder is probably contributed by the as yet less developed sebaceous glands; and at birth we find the infant covered with a coating of fat, of variable thickness and consistency. I have myself observed it a full quarter of an inch thick, and strongly resembling lanolin. Doubtless it is desirable, from motives of cleanliness, to remove this superabundant secretion, but, as nature still continues to pour out the protective covering over the young skin, it is surely mischievous to remove it so completely as is usually done twice in twenty-four hours, and to add nothing similar in its place.

We ought rather to imitate nature, and after every bath apply a bland unguent, containing some antiseptic and sweet-smelling ingredients, over the infant's skin. This is a far more effectual protective against the irritation caused by the infant's evacuations than any of the dusting powders usually employed. The nations of antiquity were wont to lubricate the body of even the adult as a sequel to the bath, and they certainly had very sound physiological reasons for doing so. The skin, after a prolonged Turkish bath, becomes uncomfortably dry, because the coil glands are suffering reaction after their stimulated efforts, and are no longer exuding the natural oil upon the surface. The Romans knew this, and obviated it by the use of various fragrant salves; but the use of unguents has been confined entirely to diseased skins by ourselves and other civilized modern nations. Perpetual removal of nature's protective, supplemented by a too zealous applica-cation of soap and flannel, are, then, most potent exciters of infantile skin troubles.

Of internal causes, we may first consider improper feeding as productive of skin manifestations. In a large number of cases that have come under my notice, I have found that an infant of perhaps a few weeks or months old was being fed on the most injuriously contrived indigestibles, and that a return to a simple milk dietary wrought a marked change for the better in a few days' time. It is easy to understand why a too nitrogenous, stimulating diet should affect the skin, when we remember that the excess of uric acid so produced has to be got rid of by the two great emunctories, the kidneys and the skin, which may equally resent the extra work thrown upon them. Of other internal causes, we may mention the blood dyscrasia of Syphilis, Scrofula, and the Exanthematous Fevers, and congenital abnormalities, or defectiveness of structure; in which last we may also include what the French school have somewhat vaguely, but yet usefully, termed the *Dartrous Diathesis*, or proneness to skin disease of one form or another.

It will thus be readily seen that, whatever other organs may be exposed to hurtful influences during infancy, the skin may have to run the gauntlet of not a few, and is a frequent sufferer from one or other of the causes just mentioned.

CHAPTER II.

SKIN DISEASES INITIATED IN UTERO.

INFANTS are occasionally born with some form of skin disease more or less fully developed, and it is very desirable to recognise the true nature of these lesions, as most of them are of considerable gravity, and some are almost necessarily fatal.

There is nothing to be gained in a work like the present by introducing any sort of classification of these diseases, and as there are not many varieties, they may be taken without regard to order. The most formidable of them, though fortunately it is far from common, is the condition known as

Ichthyosis Congenita.

Etiology and Pathology.—It is manifestly difficult to fix the date of its onset in the fœtus, but it is probable that from the very first beginning of epidermal cornification, that process is in excess, and overpowers the centrifugal growth of the derma. In normal skin development the centrifugal dermal growth and the centripetal epidermal growth exactly balance each other, the derma gradually expanding the epidermis, which latter acts as a check upon the too rapid expansion of the former. But in Ichthyosis the epidermal ingrowth and cornification are excessive, and although the derma is thereby stimulated to increased activity, it is nevertheless strangled by its environment, and the expansion of the growing fœtus is interfered with. In its efforts to expand, the body actually bursts the horny layer of the epidermis at its weakest points, and so *rhagades* and furrows are produced, dividing the surface into irregularly outlined plates, not unlike crocodile skin in appearance. Meanwhile the skin does not expand *pari passu* with the growth of the fœtus inside it, and is wont to be curtailed at the very points where normally it is most abundant and mobile. Hence the lips and eyelids may be wanting, the anus pulled out level with the surrounding parts, gaping and fissured, the extremities shortened and distorted. Such beings do not generally go the full term of *intra-uterine* life, but are born a month or two prematurely.

The cause of Congenital Ichthyosis is yet obscure, but it is probably due to some lesion of the nerve centres governing the nutrition of the epidermis, or of the cutaneous nerve branches. Leloir claims to have demonstrated the latter connection.

Hardy strongly insists upon the hereditary character of Ichthyosis, which other pathologists dispute. A case has been recorded where the same mother produced two such children within a year.

Fortunately it is a comparatively rare disease in England, although painfully common in some parts of the East.

According to Hirsch, it is endemic in the

Moluccas to such an extent, that five per cent. of the entire population are more or less affected by it.

Course and Termination.—In congenital cases the absence of mobile lips may render sucking impossible, so that the poor infant literally starves to death; but even when the lips are not so seriously affected, the prognosis is still most unfavourable, as the child cannot expand the thorax to breathe sufficiently, on account of the tightening grip of its own epidermis, and dies in a few days exhausted in the effort.

The onset of Ichthyosis may, however, not be observable at birth, and if it be delayed awhile, the child is in a much better position to fight against it than when in the fœtal state. Breathing and thoracic expansion are now established, and the derma is thicker and stronger, relatively to the epidermis, than it was in the fœtus. So that the older a child is, the more chance it has of successfully resisting the cruel constriction of Ichthyosis, although it may never entirely shake off the hereditary enemy. When the disease first manifests itself in an infant of one, or two, or more years of age, it runs a course of slow development, and attains its maximum about puberty; but it does not succeed in strangling and killing its victim, as it would have done had the attack commenced *in utero*. Moreover, it is not universal, but more or less limited in area.

As might have been expected, much has been written to show that intra-uterine Ichthyosis is a distinct disease from that which occurs after birth; but I cannot myself see any radical difference; the conditions of the subject are profoundly different in the two cases, and the characters of the lesions are correspondingly modified, but apart from this the disease is essentially the same.

What, then, are the general characters of Ichthyosis? In regard to site, it shows a predilection for the extensor surfaces of the limbs, and especially the skin over the large joints—elbows and knees—resembling in this respect the much more common and less serious lesions of Psoriasis. Two varieties occur, which may blend more or less with each other. In the one, the surface of the skin is thick and rugged, but not papillomatous, because the dermal papillæ have not responded to the stimulus of the ingrowing epidermis, and are not hypertrophied; in the other the surface is covered with pointed projections, which are formed by hypertrophied papillæ carrying the thickened epidermis before them, and rising far above the general surface-level of the skin. Both varieties are commonly pigmented, generally a brownish green, and the affected area is bounded from the healthy skin by an abrupt margin. This excessive horny growth may stifle and destroy the normal skin appendages—hair follicles, coil glands, and sebaceous glands—so that the surface becomes hairless, harsh, and dry. The horny cuticle is shed in profuse scales, which are pigmented, not silvery, as in Psoriasis, nor minute and branny as in Pityriasis, and is of a warty character, which can hardly be

mistaken for that of any other lesion. Still, it may be confounded with **Zeroderma**, which consists in a deficiency of sebaceous follicles, presenting in consequence a smooth, hairless, harsh skin. But in Ichthyosis the skin surface is rough and fissured. *Z*iegler implies that it may possibly be confounded with **Seborrhœa**, a warning which is rendered necessary solely by the latter disease having been most inappropriately named **Ichthyosis Sebacea** by some nomenclaturist.

Treatment.—When congenital, Ichthyosis is quite beyond remedy of any sort. Occurring later in childhood, the prognosis becomes favourable so far as life is concerned; but that life may be rendered more or less miserable, according to the extent and intensity of the disease.

Therapeutics are of only palliative value, and consist in the careful removal of the caked, superabundant horny scales, by means of hot baths, and strong soaps, and the subsequent lubrication of the affected areas with a bland oil or ointment. Internal treatment is worse than useless, as likely to disturb the general health, which usually presents no other abnormality.

Prognosis.—Absolute recovery is extremely rare, although remissions are not uncommon. Hebra mentions only two recoveries, which took place apparently as the result of attacks of measles and small-pox respectively.

Widely different from Ichthyosis is the condition termed **Leioderma or Glossy Skin**, which consists of a congenital deficiency of development of both derma and epidermis, with resulting functional degradation. The surface exhibits *maculæ* of divers tints; it is commonly smooth and glossy; the epidermis is thin and fragile, the derma lacks substance and elasticity, and the subcutaneous fat is markedly deficient. When slackened, the skin shows a wrinkled appearance, but under ordinary conditions it is tightly stretched over the body. When Leioderma is well marked, it is generally coincident with other lack of development, and infants so affected soon die; but it is hard to say exactly the share which this condition has in the fatal result. If the phenomena of Leioderma be not well marked, however, we should certainly endeavour to stimulate the imperfect development, by massage, the continuous current, or inunction of a mild stimulant ointment, of Camphor, Rectified Spirit, and Oil of Rosemary, in a medium of Benzoated Lard and Lanoline. Cod liver oil with hypophosphites should be administered, and nutrition promoted in every way.

In **Zeroderma** again we have "a skin white and tense, the epidermis thin and shiny, and coming off in glistening scales." Such is Ziegler's graphic description; but it is plain that some confusion of terms exists about this lesion; as Tilbury Fox describes it as being merely a milder form of Ichthyosis. I should regard both Leioderma and Zeroderma as essentially atrophic conditions, the sebaceous and coil-glands being more especially defective in the latter, so that in it the dry and cracked epidermis may closely resemble a mild degree of Ichthyosis.

But Ichthyosis is obviously hypertrophic—cornification being excessive, which it is not in Zeroderma. Zeroderma should be treated on the same general principles as Leioderma, and if it exist in but a minor degree there is ground for hope that development of the defective appendages may occur.

Last of these general anomalies of development we have **Sclerema Neonatorum**, which in all probability commences *in utero*, although it may escape notice for a few days after birth.

Etiology and Pathology.—The skin affected by this lesion is "shining, tense, of a rosy red colour, occasionally dirty brown or yellowish; it is puffy in places, leaves a depression after pressure with the finger, becomes hard throughout, and cannot be raised in folds." Such is Schwimmer's brief but accurate description. Langer maintains that it is due to solidification of the *panniculus adiposus* by cold. The morbid changes begin in the lower extremities, and rapidly involve the abdomen, chest, arms, neck, and face; the temperature meanwhile shows a marked fall below normal, mobility is interfered with, the child refuses food, falls into a comatose state, and dies generally in a few days.

Prognosis and Treatment.—We have here in all probability to deal with a trophoneurosis of the gravest character; allied it may be to that which produces *Myxœdema* in later years; and the prognosis is extremely unfavourable. Nevertheless, since cases have been claimed to have recovered when mild in type, and vigorously treated, it is our duty, as soon as the affection is diagnosed, to employ and persevere with stimulating inunctions, baths, artificial warmth, and galvanism. Certainly nothing but death can result from expectant treatment. Fortunately it is a rare disease; it is one which occurs chiefly amongst those whose hygienic surroundings are bad.

Amongst the congenital abnormalities which affect the skin we may next consider the so-called "**Vascular Nævus**"—a very unfortunate name, as the word nævus is also applied to other lesions of totally different pathological character.

Etiology and Pathology.—This Vascular Nævus is, in truth, an area of irregular shape and of variable size, in which the dermal capillaries are in a condition of aneurism or persistent dilatation. The result is the well-known port wine or birth-mark, which, when it occurs on the face, often causes hideous deformity. It may be flat and superficial, or it may involve vessels of larger size than capillaries, forming an elevated tumour. Nothing definite is known as to the cause of this lesion.

Prognosis and Treatment.—There is considerable risk, in eradicating a blemish of this character, of leaving a cicatrix on the site of the purple patch, but certainly a scar is the less disfigurement of the two. Various remedies have been employed with variable success. Some skins break down into an ulcer under the action of caustics, which can be borne by others with much less effect. Repeated application of blistering fluid is often successful, and is less likely to cause scarring than any caustic. Flexible collodion, with the addition of from 1 to 4 per cent. of corrosive sublimate, painted over the stain, is a very useful application, but in the case of a large area only a portion, the size of a shilling, should be painted at first, that the effect may be carefully watched. Small *ectases* may be readily removed by the electrolytic needle, and the larger elevated tumours often yield to the same treatment, which is much less severe than some of the remedies commonly employed, such as ligation of the mass. In any case it is worthy of trial. Multiple scarification sometimes yields brilliant results, but is tedious and not free from pain.

True NÆVI are also congenital, and consist of circumscribed skin hypertrophies, in which all the tissues in varying proportions play a part.

Thus if the hypertrophy be chiefly of the derma, we have the so-called **Nævus Spilus**; if of the epidermis, **N. Verrucosus**; if of the hair follicles, **N. Pilosus.** These varieties may or may not be accompanied by excess of pigment, or the latter may be the most prominent feature, forming a mere brown macula—the N. pigmentosus. All these varieties are usually innocent growths, but may give rise to no little disfigurement. They may then be treated similarly to the *ectases*, but in most cases a scar remains on the site of the nævus.

It is perhaps scarcely accurate to include as a congenital skin affection that **Cardiac Cyanosis** which is due to structural imperfections, into the details of which we need not enter, but it is well to note this distressing and incurable condition, because the dermatologist may perhaps be consulted concerning it. Not a few infants are born more or less asphyxiated; with the skin, especially that of the face, the lips, and tongue, of a dusky livid blue. If breathing be set in action, and the heart be normal, this condition quickly disappears, and is succeeded by the natural hue of health; but if the heart be so constructed that the pulmonary and systemic circulations become confused, instead of working in their separate circuits, a part only of the venous blood is oxygenated in the lungs, and the lividity is more or less persistent. If well marked the infant usually does not long survive, but the struggle for life may be prolonged in less severe cases for many years, the poor sufferer leading a most undesirable existence.

Needless to say that the persistent lividity ot complexion is but a symptom of a grave structural malformation, which we cannot possibly hope to cure, and can do but little even to ameliorate. For a full account of congenital cardiac lesions, the reader may consult Lebert's article in vol. vi. of Von Ziemssen's 'Cyclopædia.' It only remains to be noted in this chapter that the **Eruptive Fevers,** and most important of all, **Syphilis,** are developed in the fœtus *in utero;* but we shall consider these in the next and subsequent chapters.

CHAPTER III.

ERUPTIVE FEVERS.

PERHAPS the most obvious feature of this group of diseases is the variety of skin manifestations which distinguishes each one. It is chiefly by the character of the eruption that the diagnosis of each is established, and it is therefore of the highest importance that these characters should be thoroughly studied and recognised.

I lately saw a striking instance of the danger resulting from neglect of such necessary knowledge. A patient, who had been sent up from the country by a medical practitioner, presented himself amongst a crowd of others in the out-patient department of St. John's Hospital, on account of a most typical skin eruption, which the practitioner had declared he was unable to diagnose. The case was one of simple Variola!

We have therefore to consider the following group: **Variola** or **Small-pox, Varicella** or **Chicken Pox, Morbilli** or **Measles, Rubeola, Rötheln** or **German Measles, Scarlatina,** and we may include **Erysipelas.** As has been noted in the last chapter, all of these, except the last, may attack the unborn child, and all may occur at any age after birth.

The infant is, however, usually more susceptible than the adult.

Let us consider these diseases in the order named. Curschmann has diagnosed **Variola** in a fœtus expelled at four months, and it has frequently been observed at later periods of intra-uterine life. Needless to say, the fœtus is infected by the mother, but apparently not through the maternal circulation, for numerous instances are recorded in which the mother, having passed through the attack, has several weeks subsequently given birth to a child in the height of the exanthem. Thus, for instance, Curschmann describes a case in which a primiparous woman exhibited Variola from Nov. 28th to Dec. 12th. Fœtal movements were active until Dec. 28th, when they suddenly ceased, and, three days after, a dead six-months' fœtus was born with the eruption fully developed upon the skin.

It would occupy too much time to discuss in this place the various explanations that have been offered of this curious delay in the passage of the contagium from the mother to the fœtus. Some observers have cited instances in which the fœtus was apparently infected, while the mother remained healthy; but these are easily accounted for, on the ground that the mother actually did suffer from an unrecognised mild attack, either with or without eruption, and possibly protected partially by vaccination. This occurring some time previous to the birth of the variolous fœtus, the connection between the mother's malaise and the infant's Small-pox was obscured.

Diagnosis.—I do not know of any other eruption, except that of Varicella (Chicken-pox), with which it is likely to be confounded; the circular, shot-like, red papule passing soon into the umbilicated sero-pustule being easily recognised; and if any doubt exist, the thermometer should soon settle it. The eruption of Varicella is not raised and shot-like; it forms a vesicle rather than a pustule, which runs its course in two to three days, drying up and only rarely leaving a slight cicatrix. The accompanying fever is either absent, or but slightly marked and transient. Still the mildest cases of Variola, with sparsely-scattered lesions, have not unfrequently been mistaken for Varicella; and pathologists are not yet entirely in accord as to the exact relations and differences between the two diseases.

Prognosis.—As we might anticipate, Variola is a very fatal disease to both the fœtus and the new-born child.

Treatment. — The general therapeutics of Variola require no special notice; fresh air, easily-assimilated nourishment, quinine, ammonia, and stimulants, used with discretion, are our best allies.

Various plans have been advocated for preventing the frightful disfigurement caused by the 'pitting' of Small-pox, such as painting with flexile collodion—to each ounce of which it may be advantageous to add one grain of corrosive sublimate, carbolized oil, sanitas oil, etc., all with a view to exclude air and development of the contagium. But we must always bear in mind that the amount of 'pitting' will depend mainly on two factors—(1) the proportionate severity of the attack, and (2) the degree of vulnerability of the skin-tissues; if these be unfavourable, some cicatrization is bound to ensue, no matter what treatment be adopted.

It need scarcely be said that if even a suspicion of Small-pox remain, after examination of a doubtful case, isolation, disinfection, and the immediate re-vaccination of the entire household should be absolutely insisted on.

The eruption of **Varicella,** or **Chicken-pox,** is usually preceded or accompanied by but slight malaise and rise of temperature. Red, scattered spots make their appearance first upon the head, neck, thorax, and arms, the face occasionally being also implicated. In the course of twenty to thirty hours, these become distinct vesicles, while new spots make their appearance, both in the neighbourhood of the first crop, and over the abdomen, back, thighs and extremities. In another day, or two days, the earliest vesicles have begun to dry up, and the later spots have effloresced into vesicles. These in their turn dry up, and are covered with an adherent scab, which, on desquamation, leaves a red, slightly-depressed spot.

Occasionally a new crop appears about the fourth or fifth day, running a similar course to its predecessors; but usually the entire attack subsides within a week. The mucous membrane of the buccal cavity of the larynx (Lennox Browne) and of the genitals may be affected by Varicella, the complication causing pain in eating, swallowing, and micturating.

Prognosis.—Although Varicella is usually a disease of trifling import in a healthy child, it may lead to other skin-lesions in a sickly one. Thus the vesicles may effloresce into large bullæ, or an extensive eczema may be initiated.

Treatment.—Warm baths, and the free application of borax ointment, with good nourishment, are usually all that are required to mitigate the attack and to prevent the sequelæ which have been mentioned.

We may note in this place that Varicella affords no immunity from Variola, and that vaccinia affords none from Varicella.

Morbilli or **Measles** may attack the fœtus *in utero,* Professor Thomas, of Leipzig, having from various sources collated at least six instances; nor is there any lack of cases occurring within a day or two after birth. It is not generally difficult to trace the source of contagion.

Diagnosis.—This is a very necessary point, in forming a diagnosis, since, at a particular stage, the efflorescence of the worst and most deadly form of Variola—the hæmorrhagic—may so simulate that of Measles as to deceive the unwary.

The same mistake may be made in regard to Typhus, and also to Rubeola and Scarlatina. We should therefore use every effort to ascertain whether undoubted cases of Measles have occurred in the patient's environment, or whether some totally different contagious disease is prevalent.

Measles is usually preceded by a marked naso-pharyngeal catarrh, which we do not find in Variola, Typhus, or Rubeola, while in Scarlatina the throat alone is affected.

A typical eruption of Measles is crimson, dusky red, or purplish; it appears in crescentic or indented blotches, sometimes confluent, first on the face, neck, and chest, and soon after over the whole body.

There may be slightly-raised papules on the surface of the blotches, but they do not resemble the small, brilliant red specks of Scarlatina; nor do they ever become vesicles or pustules. The face may appear puffy, but does not swell to the extent that it commonly does in Variola. The temperature is high, and increases as the eruption develops; whereas, in Variola, the tendency is for the temperature to fall *pari passu* with the efflorescence on the skin.

The eruption of Typhus begins usually on the abdomen, and does not much affect the face. It is also but slightly developed in young children.

The eruption of Rubeola may easily be mistaken for that of Measles, but it lacks papulation; the mildness of the fever also, and of the catarrh, as compared to what usually obtains in the latter, materially assist the diagnosis. Again, while the eruption of Scarlatina in certain types may simulate that of Measles, the two diseases are differentiated by the much shorter period of malaise, the well-known strawberry appearance of the tongue, and the greater swelling of the parotid, cervical, and submental lymphatic glands in the graver malady.

Course and Prognosis.—The incubation period of

Measles is from ten to fifteen days; the rash appears on the face on the fourth day of fever, and begins to fade after the seventh day. There is commonly some desquamation of the epidermis. The accompanying naso-pharyngeal catarrh may cause no little suffering, but laryngitis, bronchitis, and especially pneumonia, are the complications most to be dreaded.

Treatment.—Spraying the throat with sulphurous acid, or steam inhalations, medicated with terebene, or oil of eucalyptus, often relieve a simple catarrh, while jacket poultices or spongio-piline fomentations are of great benefit in case of pulmonary congestion. Frequent sponging, with a warm borax bath, and after inunction with carbolized or sanitas oil, as in Variola, will lessen the itching and discomfort of the skin. Too much care can hardly be exercised in protecting the little patient from cold during convalescence, as thereby a mild disease may be prevented from assuming grave proportions.

Much controversy has arisen concerning the propriety of regarding **Rubeola,** or **German Measles,** as a disease *sui generis,* but while its phenomena frequently approach in type those of Measles on the one hand and Scarlatina on the other, the weight of evidence is strongly against its being in any sense a hybrid of those two, or a mere abnormal variety of either.

The eruption of Rubeola is seldom preceded by malaise or pyrexia to the same extent that we find in these other graver diseases. It commences on the face and neck, and consists of bright rosy spots, generally round, and discrete, larger than those of Scarlatina, smaller than the blotches of Measles. The skin intervening is seldom hyperæmic. The eruption spreads downwards over the whole body, but by the time that the lower extremities are involved, it has already begun to fade from the face; so that the maximum intensity does not coincide in different regions. Any particular region only exhibits the spots for from one to three days, and after desquamation the rash is barely noticeable. The greatest number of spots are usually found on the scalp, face, and neck. The naso-pharynx is congested as in Measles, but seldom to such a degree; there is also lachrymation and photophobia, but generally of a mild type. There is never any albuminuria, and complications are rare. An attack of Rubeola confers no immunity against either Measles or Scarlatina; and to this fact we must attribute a very considerable proportion of the cases reported as recurrent ones of those diseases; nevertheless it is undoubted that recurrence may (rarely) happen. Rubeola never makes a child so 'ill' as Measles or Scarlatina, and only the simplest care and treatment are required to nurse the patient through the brief course of the exanthem. The susceptibility to this contagion appears to decrease markedly at puberty, and is said to almost disappear with advancing years. I have seen many cases leading me to doubt this immunity of adults.

In striking contrast to these phenomena are those exhibited by **Scarlatina,** which even in the mildest form ought not to be mistaken for any other exanthem, and which in the severer types usually presents a plainly recognisable picture.

Signs and Diagnosis.—Scarlatina is almost invariably preceded by one or two days of malaise and shivering, with rising temperature, and when the rash appears on the arms and trunk it consists of minute scarlet dots, packed so closely together as almost to touch, but yet clearly distinct from the intervening skin, even though that be ruddy also. The eruption spreads in one or two days over the face and lower extremities, and begins to disappear in the same order in five or six days from its advent. The colour is usually, but not always, sufficiently clear to distinguish the rash from that of Measles, but the minute punctate dots should aid the diagnosis. In Rubeola, as has been said, the spots are much larger, even though the colour may occasionally lead to uncertainty. If any doubt arise, the tongue will usually set it at rest. At first it is thickly furred, the yellowish-white surface being studded with brilliant red projecting papillæ; and after a few days the coating comes away, leaving the tongue preternaturally red, but with the papillæ still prominent. The fauces and tonsils also exhibit more or less the same uniform brilliant injection, while in Measles they are more or less mottled.

Cases may occur in which the exanthem is so slightly marked that the disease is never suspected until the desquamative stage is reached, when the peeling of the skin first attracts attention. Such cases are by no means devoid of danger, for two reasons: first, because the kidneys may be much more seriously implicated than we should be led to expect from the trifling character of the skin eruption; and secondly, because the desquamation from even such a mild case may convey contagion to others, quite as surely and severely as that from a more well-marked one. Every precaution should therefore be taken against catching cold, and the spread of contagion. As the rash disappears, the epidermis begins to peel off, in small scales from the face and trunk, but in large flakes from the extremities. This process may be protracted for many days, and so long as it continues the patient remains a dangerous centre of contagion to those within reach of stray particles of shed epidermis; the latter being thickly peopled with the infective bacteria or their spores.

The kidneys suffer more or less in all cases of Scarlatina, as evidenced by scanty urine, tube-casts, albuminuria, and in severe cases by anasarca, suppression, and resulting uræmia.

Such are briefly the main features of **Scarlatina Simplex.**

In the type denominated **Anginosa**, the eruption is irregular, its appearance being delayed to the third or fourth day of fever; it exhibits patches which come and go, and reappear after a day or two. In such a case the throat symptoms are much more severe than in the simple form, the tonsils being swollen, congested and even suppurating, and the accompanying fever running high. Deglutition is usually most painful, and the parotid and cervical glands are inflamed. Laryngitis, or Suppurative Median Otitis, with extension to the Meninges, may occur, any of them constituting a sinister complication.

Graver still is the type most aptly termed **Maligna**, in which the exanthem is even more irregularly and scantily developed, and the full force of the attack falls upon the mouth, pharynx and tonsils, and the internal organs.

The fever in such cases quickly assumes what, for want of a better adjective, we are constrained to term the typhoid type, while the mouth and throat lesions run rapidly on to suppuration, and even gangrene. Muco-purulent discharges may flow from the nose, ears, eyes, and vagina, and even when the unhappy little patient does survive the attack, recovery is tedious and often imperfect.

Needless to say that this aggravated form of Scarlatina is very fatal, and that to combat it with success the patient must have a vigorous constitution and the best of nursing.

Treatment.—It was long ago remarked by Sydenham that the milder form is fatal only through the officiousness of the doctor. Frequent bathing with tepid water, the after inunction of the skin with carbolized vaseline or boracic ointment, isolation in a well-ventilated apartment, light milk and farinaceous diet, with plenty of oranges, grapes, and home-made lemonade, with a simple saline occasionally, should the bowels be constipated, are all that are required. But in the severer forms we cannot follow an altogether expectant method. When the temperature is high, and the skin hot, harsh, and dry, with irregular and fugitive eruption, we may often obtain marked benefit by the use of the wet pack—not used cold, but tepid. This is generally followed by diaphoresis, a copious exanthem, and a fall in temperature. Delirium may be mitigated by an ice-bag applied to the head, and the sucking of small chips of ice is most grateful to the patient. Spraying or swabbing the fauces with dilute lactic or carbolic acid (10 per cent.) is sometimes of marked benefit, and internally we must administer quinine with hydrobromic acid in full doses, according to the age of the patient, sulphocarbolate of soda, or carbonate of ammonia. Stimulants, which must be of only the very best quality, are to be used judiciously, but boldly; and the patient should be fed with iced milk, iced beef-tea, or calves'-foot jelly—the latter genuine, and not the compound of glue and gelatine sometimes sold in bottles under that name. If swallowing be imperfect, we must feed by the rectum, using *only* peptonized, pancreatised, and bile-digested milk and beef-tea.

Special complications must be watched for, and promptly met: after the brunt of the attack is over, we should carefully husband whatever strength may remain to the prostrated patient, and add to it only gradually by such agents as malt-extract, cod-liver oil, hypophosphites, etc. We cannot here describe in detail all the various complications in nose, eyes, ears, tonsils, etc., that may arise as a result of Scarlatina invasion, and, indeed, apart from its manifestation on the skin, the disease hardly falls within the scope of this little work. But as exanthematous fevers are unfortunately yet so prevalent, and as their exact nature is not infrequently misunderstood, we have thought that in addition to a consideration of their diagnostic differences, these few digressive remarks on general treatment might prove not unacceptable.

It is fortunately long since this country has been visited by an epidemic of **Miliary Fever**, so that we are indebted for recent and reliable information concerning it to the work of foreign observers. Doubtless the word *Miliaria* is often very loosely applied to cases of minute vesicular eruption, which are transient, of trifling importance, and non-epidemic; but it is obvious that such phenomena, which not infrequently occur during the course of other diseases, have no connection with true epidemic Miliary fever, that fearful 'sweating sickness' which devastated England from time to time during the fifteenth and sixteenth centuries, and milder epidemics of which have occurred throughout Europe down to the present day. It is impossible to determine whether the appalling mortality of the earlier epidemics as compared to the later ones was due to the unspeakable insanitary condition of the inhabitants, coupled with irrational treatment, or to the excessive virulence which commonly marks the outbreak of a new disease in virgin soil. It is, however, certain that from one cause or another the mortality has continued to steadily decline, so that whereas in 1485, 'scarce one in a hundred that sickened did escape with life' (Holinshed, vol. iii., p. 482), in the epidemic of 1866 in Pernes-en-Artois, which was unusually severe, there were 49 deaths in 225 cases. Other modern records show an average mortality of eight to nine per cent.

Although free from invasion for many years, it is by no means certain that England will enjoy perpetual immunity from this disease, and although Miliaria is a disease more of adult than of early life, we may briefly note its chief characters in this place. It does not seem to be acutely contagious, like other fevers, but rather to be due to an endemic malaria. It is possible, however, that future experiment may modify or contradict this view. The disease appears to have a short prodromal stage, followed by profuse sweating, with severe palpitation, and angina. After an uncertain number of hours, this stage is followed by a papular rash, resembling Measles, but having a vesicle in the centre of each spot, and after a few days there is defervescence and desquamation. The temperature and pulse are high, and there is usually constipation, with scanty or even suppressed urine.

The disease is very erratic in its course, and appears and disappears in a district without ascertainable cause. It is in the highest degree probable that if any case of Miliaria be suspected, other cases will be heard of in the immediate vicinity, which will aid the diagnosis. We need not here refer to any of the varieties of Pseudo-miliaria.

No little uncertainty and confusion have arisen upon the subject of **Erysipelas**, which name has often been loosely applied to all manner of diffuse inflammations of the skin. True Erysipelas may indeed present very various phenomena, but all are associated with the invasion of a specific micro-organism, which is not the case with the other non-contagious inflammations, simulating them. As the disease may be very dangerous in infancy, it is therefore of the utmost importance to diagnose a suspected case at as early a stage as possible. In every case of true Erysipelas we shall find that the patient has been 'ill' for a day, or longer, before the skin manifestation appeared, and that *pari passu* with the development of the latter, the malaise, sickness, and pyrexia have increased. No mere Erythema produces such severe constitutional disturbance, and even the secondary fever produced by an extensive Intertrigo is mild in comparison.

So that if the patient exhibits no sickness and malaise, and especially if the thermometer does not show a rise of more than one degree above normal, we may confidently dismiss Erysipelas from our diagnosis, even though the skin phenomena may closely simulate it.

Prognosis.—Speaking generally, Erysipelas is more deadly to the new-born infant than to the older child, and its virulence decreases with advancing years, except in the case of a puerperal woman, in whom the poison runs riot. It again becomes of more serious import when old age is reached.

However slight and unnoticeable the abrasion may be, Erysipelas always gains entrance at some epithelium-denuded point, frequently by a fissure scratch, or wound. The slightest crack or loss of epidermis, especially at the junction of skin and mucous membrane, is quite sufficient; hence the inner angle of the orbit, the nostrils, lips, etc., are frequently the starting-point of the invasion; or the disease may originate in a mucous passage. The region attacked exhibits redness, heat, tingling, and swelling, the surface looks glassy, pits on pressure, and has generally a map-like margin bounding it from the true skin. This margin advances centrifugally, and the pain and swelling increase proportionately. Small vesicles or large bullæ may form on the surface, and the intervening epidermis be shed in bran-like scales.

The neighbouring lymphatic glands become inflamed, and in severe types diffuse abscesses form in the lower derma and subcutaneous cellular tissue. In mild cases the phenomena last on one spot for not more than three to four days, and if the disease does not take kindly to its host, and spread over fresh areas, it may quite disappear in that time. But if the soil be congenial, and the brood vigorous, it may creep from point to point for many days or even weeks, and recur at such long intervals that it may be hard to decide whether we are dealing with a new invasion, or a recrudescence of an old one, which had lain dormant in the tissues. When Erysipelas attacks the face it usually spreads rapidly, and causes great disfigurement by swelling of the features; and in the case of weakly subjects it may extend to the naso-pharynx or larynx, to the orbit, and the middle ear. Delirium is common in such cases; but the cerebral symptoms appear to be due to the pyrexia rather than to any inflammation of the brain and its membranes—post-mortem evidence of such being lacking (Trousseau). But the eyes may be destroyed by intra-orbital abscess (Arlt), the laryngitis may prove fatal (Velpeau, Lewin, Trousseau); or the inflammation may extend to the bronchi, or to the lungs. Albuminuria may occur, and cases of peritonitis and pyæmia have been recorded. So that although the majority of uncomplicated cases recover, the disease is by no means devoid of danger to life. Especially is this the case when the umbilicus of the newly-born infant is the point of invasion. The inflammation in such a case tends to spread rapidly, to involve the peritoneum and abdominal viscera; and when this occurs the prognosis becomes so grave that Trousseau regards it as absolutely hopeless. I have seen a case of this sort prove fatal within two days of the first blush of inflammation.

As has already been noted, the thermometer is of great service in distinguishing between Erysipelas and Erythema; and the same may be said of Urticaria, as in both of these last-named there is little if any fever.

The temperature in Erysipelas ranges high, and is in proportion to the extent of surface implicated and the severity of the local lesions. Wunderlich has reported cases in which over 107° F. was reached; but more commonly it does not exceed 104°. The pulse may range up to 140°.

There are, however, one or two disorders in which the diagnosis is apt to be difficult. Inflammation of the superficial lymphatics — Lymphangitis — may closely simulate Erysipelas; and here the thermometer is unreliable, as the pyrexia may run high in both. Where the lines of the lymphatics are traceable as hard cords, corresponding to red streaks on the skin, the diagnosis of Lymphangitis is easy; but if the surface redness is more diffuse, and the hard cords are masked by swelling, it is otherwise. If, however, we note that the inflammation has no marked margin, and that it spreads from the extremities towards the body, it is probably Lymphangitis. There is also a form of diffuse Phlegmonous Inflammation which closely simulates the most severe form of Erysipelas, and is hardly to be distinguished from it—except that its margin is not so well defined, the colour is a duskier red, and the skin harder to touch. It, like Lymphangitis, commonly ends in suppuration, but both are *non-contagious*. The bullæ of infantile contagious Pemphigus may be confounded with those of Erysipelas; but in the first, the redness merely surrounds the bulla as an areola, and has never a serpiginous margin—each bulla has its own areola, the intervening skin being normal. Moreover, the pyrexia never runs so high as in Erysipelas. In sickly or ill-nourished subjects Erysipelas may cause extensive damage in the regions in which the skin is thin and delicate, such as the eyelids, scrotum, vulva, etc., where large areas may actually slough (Arlt).

The bacterial causation of the disease has been established by the experiments of Lukomsky, Volkmann, Orth, and many other independent observers.

The contagion of Erysipelas is prone to become endemic, and so, certain hospital-wards in which it has once prevailed may for long defy our efforts to disinfect them. It is very certain, moreover, that, in pre-Listerian days, surgical instruments were a common medium of contagion.

Treatment.—Incision of Erysipelatous areas was once the ordinary routine; some authorities advocating an unlimited number of short cuts, whilst others believed in the virtues of a single long one. The blade used for this purpose was often perfunctorily washed in cold water, and used, perhaps the same day, upon a non-erysipelatous patient; with what result we can readily guess. General blood-letting, and the actual cautery, were relied upon by some to limit the advancing margin; whilst others strove, with more or less success, to impose a barrier of inflammatory exudation against the creeping enemy, exciting an artificial Dermatitis in the neighbouring sound skin, by means of caustics of one sort or another.

Procedures so unnecessarily cruel are not in favour in our more enlightened days; nor is it necessary to mention in detail all the ingenious measures which have been vaunted for a season, only to be discarded for some newer fad. I shall, therefore, confine myself to mentioning those measures which have in my own hands proved of most marked benefit. A mild —not a violent—evacuation of the bowels should be at once encouraged; and this should be followed up by full doses of perchloride of iron or of the tincture of the muriate of iron (Ed. Ph.). The affected part must be treated upon one of several distinct plans—the best of which can only be ascertained by trial in each individual case. One is by hot linseed-meal poultices, made with a 5% solution of carbolic acid and one or two drachms of laudanum. This often affords marked relief to the local pain and discomfort. If it fail to do so, we should dust the parts with starch-powder, to which has been added 1 to 2% powdered camphor, and envelop the whole in cotton wadding. Sometimes dry cold—as by an ice-bag—affords the best relief; and we should not be satisfied until we have ascertained by trial which local treatment gives a satisfactory result. Subcutaneous injection of a 2% solution of carbolic acid has sometimes in my hands been of great service—but this I believe to be due to its anodyne property, and not to its germicide action on the bacteria of the disease. Sulpho-carbolate of soda has been highly praised as a subcutaneous injection, but I have had no experience of its use. Should the pyrexia run high we should give aconite, which will generally lower the temperature considerably. Quinine with hydrobromic acid has often proved of the greatest value where iron is not well borne. The patient should be well fed and nursed, and treated in other respects according to ordinary rational rules.

Prognosis.—The most rigorous disinfection of the sick-room and bedding should be carried out as soon as recovery is established, as one remarkable feature of this disease is that, far from one attack acting as a protective to another, the reverse is unfortunately the case, and recurrences as well as relapses are quite common, though this statement is more true of the aged than of infants and young children.

CHAPTER IV.

CHRONIC NON-FEBRILE BACTERIAL DISEASES.

THIS group comprises the most formidable diseases which manifest themselves markedly on the skin—formidable not so much in that they cause sudden and immediate danger, like those described in the last chapter, as in that they poison and enfeeble the constitution, often for life, that they predispose to a train of deadly disorders, and that they occasion the most ghastly disfigurements by destruction of features, bones, and joints. Other members of this group again are of far less relative importance, although sufficiently disfiguring and discomforting. We shall begin with the milder ones first, viz., **Pemphigus Contagiosus, Impetigo,** and **Molluscum.**

It is perhaps wrong to speak of **Infantile Pemphigus** as a mild disorder, seeing that children suffering from it occasionally die; but I have never been able to satisfy myself that death in such cases was due to the Pemphigus alone. Syphilitic and cachectic infants seem to be more especially attacked by it, but the death which commonly results is due to the cachexia, and not to the Pemphigus.

The lesion of Infantile Pemphigus consists of a bulla, or bleb containing sero-pus, and seated on a slightly inflamed base. It is curious that, while one dermatologist—Lesser—maintains that "the palms of the hands and soles of the feet are almost never affected," another observer—Liveing—states that 'it attacks especially the palms and soles.' My own experience is confirmatory of Dr. Liveing's opinion. This bleb lasts for a few days and bursts, and a crust forms, which finally becomes detached, leaving a glazed red mark, but not a permanent cicatrix. The blebs may be few or many in number, and their discharge is prone to contaminate other portions of the patient's skin, or that of the nurse or other children, reproducing the same phenomena. If neglected, the disease may last an indefinite time, and multiply so as to worry the poor infant into a very miserable condition.

Pathology.—The bacteria of Pemphigus are readily demonstrated when the serum from the bleb is dried on a cover-glass and stained with fuchsin. They consist of cocci, which arrange themselves in chains or in zooglœa, and in some specimens the latter almost fill the entire field of the microscope, so numerous are they. These cocci are easily cultivated on sterilized blood-serum, and reproduce the lesion when inoculated on an abraded cuticle.

It is a very curious fact that the next disease which we have to consider, **Impetigo**, the phenomena of which are so very different, appears to be caused by the very same micro-coccus as Pemphigus. It is not that specimens of material taken from the two lesions exhibit cocci which are microscopically indistinguishable, but that contact with Impetigo will in some cases produce Pemphigus upon another individual, and *vice versâ*. Thus I have seen in a family of three girls, one with well-marked Impetigo, one with well-marked Pemphigus, and one who exhibited both lesions upon her own person. I have also seen a woman, who was nursing a child with Impetigo, attacked by bullæ on the fingers, the serum from which showed myriads of cocci. Lesser remarks that " In older children and adults the disease may give rise to the clinical appearances of Contagious Impetigo, and there is no doubt that a number of cases of Impetigo Contagiosa are really localized Contagious Pemphigus." But the problem why such different phenomena should be excited by the one agent has not yet been satisfactorily explained. Moreover, Impetigo is frequently so associated with Infantile Eczema, that it is hard to say whether it was the initial cause of the latter, or whether the Impetigo cocci chanced to light upon the eczematous surface and found there a congenial soil in which to multiply. In either case the discharge from such an Eczema will produce a similar lesion by contagion.

What, then, are the phenomena of **Impetigo Contagiosa?** In its mildest form it consists of grayish-yellow crusts, seated on a reddened base, not discharging profusely. They have been aptly compared to small drops of mortar stuck on to the skin. They commonly attack the face, especially about the mouth and nostrils, but no part of the body is absolutely exempt. The lesion is seldom seen in its earliest vesicular stage, because the slight irritation it occasions may induce the child to scratch and break the vesicle; it is by this means that the contagion is conveyed to other parts of the skin by the nails.

Much more commonly the Impetigo lesions are mixed up and blended with those of Eczema, which will be described in a future chapter.

In regard to *treatment,* both Pemphigus and Impetigo yield most readily to germicidal applications. The *bullæ* should not be allowed to break, but should be punctured, care being taken that the contents do not run over the adjacent skin. The surface should then be washed with a solution of corrosive sublimate $\frac{1}{1000}$, and the collapsed bullæ dressed with an ointment consisting of corrosive sublimate, one grain, with four drachms each of benzoated lard and lanoline. The Impetigo lesions should be first poulticed to remove the crusts, and then treated in a similar manner.

The general health of the patient will in most instances exhibit weakness or want of tone, which must be carefully investigated and treated, such remedies as cod-liver oil, hypophosphites, iron, or vegetable tonics being generally indicated. If possible, change of air, and, unless there be concurrent Eczema, sea-bathing should be prescribed. The varying susceptibility of different individuals to this contagion is very well marked, some taking it but slightly, and being easily cured, while others defy the most careful attention for a very considerable period. The subjects of hereditary syphilis are particularly obnoxious to Infantile Pemphigus, and until this dyscrasia be successfully combated the Pemphigus lesions are apt to be persistent.

The disease known as **Molluscum Contagiosum** is by no means common, nor is the infection very virulent, so that it seldom spreads in a school or amongst a family of children, with the certainty or the rapidity that marks other contagia. So far as I am aware, the infective agent of Molluscum has not yet been described by bacteriologists, but it would appear to find a congenial home only in the sebaceous follicle, which it excites to vicious hypertrophic development.

The features of the disease are small, semi-translucent, sometimes sessile tumours, varying in size from that of a mustard-seed to that of a buckshot. Each one includes a sebaceous gland, the duct mouth of which forms an umbilication on its surface. It contains sebum of a consistency varying from that found in Comedo to that of Milia (q.v.), which may be expressed by the duct. The usual site is the face and neck, and the tumours occur singly, or in varying numbers. They do not excite pain or inflammation, unless too officiously treated, but their growth may cause no small disfigurement.

Treatment.—Repeated touching with pure carbolic acid, or the acid nitrate of mercury, generally suffices to cause shrinkage and disappearance of the diseased follicle. It may be necessary after emptying the sac to apply the caustic to its interior.

Electrolysis may be tried in obstinate cases, but I myself have never had recourse to it for this purpose.

These, then, comprise the comparatively harmless group, but the group which we have next to study is far more sinister in character, being eminently destructive to tissue, and even endangering life. It consists of three—**Lupus, Scrofuloderma, Syphiloderma**—the two latter being formidable, not so much on account of their actual skin lesions, as of the constitutional malady of which they are the outward and visible sign. Lupus, on the other hand, although an obstinate and destructive disease, does not endanger life, nor does it betoken any sinister cachexia whatever.

I use the word Lupus broadly, including the several varieties which have received divers fancy names. I do not, however, include the so-called Lupus Erythematosus, which has not yet been proved to be a Lupus at all, but a Chronic Hyperplastic Erythema. But genuine Lupus presents several distinct types: one which does not pass the border line of ulceration, and one which does; one which has ill-defined and superficial nodules, one which has larger and deeper ones; but whether we dignify each by a special name or not, all are the fruit of one tree, modified by varieties of soil and environment.

The salient *characters* of **Lupus** are: Small, slightly raised, *painless* papules or nodules—(to avoid confusion of ideas, these should not be designated "tubercles")—generally multiple and confluent, dotted in an irregular area of a more or less dusky or lurid red skin; but themselves presenting a characteristic colour, which has been aptly compared to that of apple jelly. When the epidermis remains intact, it is thin and glazed, and scales off when scratched; when ulceration has occurred, a thin sero-pus exudes, which rapidly dries into yellow or dark brown crusts. The lupus ulcer is not deeply excavated; its margins are ill-defined, neither indurated nor undermined; it spreads slowly and centrifugally, tending ultimately to cicatrize in its oldest portions. Its ravages, however, are not confined to the skin alone: mucous membrane, facia, tendon, and cartilage are commonly attacked, with results of most appalling disfigurement. It does not, however, destroy bone, a point of great diagnostic importance, which helps to differentiate it from syphilitic and scrofulous lesions. A singular and notable point is the absence of pain in lupus lesions of the most destructive and horrible type. Also the fact that the neighbouring lymphatic glands are seldom if ever implicated, in which respect, again, it differs from both syphilis and scrofula.

Lupus forms an irregularly outlined patch of varying size, and unfortunately it usually selects the nose, cheeks, or lips for its operations, although it is often found on other parts of the body. Its painlessness is frequently the cause of its being neglected, and its growth is so slow that the patient, although perhaps amazed at the persistent disfigurement, rarely suspects the true nature of the disease, and relies upon one quack specific after another to remove it. Such cases often drag on for twenty or thirty years, sometimes slowly ulcerating and cicatrizing, sometimes cicatrizing without open ulceration.

Lupus does not produce any sensible deterioration of health, nor are we able to trace it to any such as its predisposing cause, a very large proportion of the cases that I have met with being in apparently perfectly sound health, but for their lupus. But the hideous disfigurement and deformity which it may cause, render it sufficiently formidable, as nose, lips, eyelids, eyes, ears, fingers, and toes may all be eaten away by its ravages.

In childhood it usually runs a more rapidly destructive course than in adult life, but it is certainly not a disease limited to early life.

Great confusion until lately prevailed as to the true *pathology* of Lupus, and many even now decline to accept the view that it is caused by the presence of a morbific micro-organism. But the fact that bacilli, closely resembling those of tuberculosis, are to be found in Lupus nodules cannot be ignored. I have already, in conjunction with Dr. Arthur Harries, discussed this important question in a brochure on "Lupus."*

Although so eminent an authority as Professor Koch has positively assured me that he has proved the identity of the bacilli of Lupus and Tuberculosis —in a word, that lupus is merely tuberculosis in the skin—I cannot accept this view of its real nature. Apart from the fact that so experienced an observer as Kaposi denies the identity, and maintains that true Tuberculosis of the skin, which runs a rapid course to death, has been occasionally met with, and differs in all respects from the far commoner Lupus, I was induced to publish in 1887 some clinical facts bearing on this question. Lupus not infrequently attacks the pharynx and tonsils; so does Tuberculosis. If, then, the diseases be identical, they must surely run a common course.

---

* London: Baillière, Tindall, and Cox, 1886.

But what do we find in lupus affecting this region?

1st. It is nearly, if not absolutely, painless, the patient being often incredulous of its existence.

2nd. Deglutition causes no pain.

3rd. It runs a slow course, and tends to spontaneous cicatrization after more or less destruction of tissue.

Contrast this with what we find in tuberculosis:

1st. It is always painful, sometimes extremely so.

2nd. Deglutition aggravates the pain.

3rd. It runs a generally rapid course to death, and I am not aware that a single case surviving five years has ever been recorded.

In the latest edition of Mr. Lennox Browne's work on the "Throat and its Diseases," there is a most interesting and able chapter on lupus in the throat, as also one on Tuberculosis, in which the dissimilarity of the two diseases is very strongly brought out. See also Allan Jamieson on "Diseases of the Skin," p. 434, for a plate and description of Tuberculosis of the buttock which is certainly quite unlike Lupus. I cannot, in the face of such clinical experience, see my way to adopt Koch's view, while fully believing that the Lupus Bacillus is the *fons et origo malis*, and that we must eradicate it if we hope to cure the lesion. Admitting, however, that Lupus is indeed bacillary in its nature, and that the micro-organism is similar, or even, for the sake of argument, identical with that of tubercle, the germs are certainly far more sparsely distributed and less infective of the constitution in Lupus than is the case with tubercle.

Apart from the bacilli, which require much patient microscopic work to demonstrate, the Lupus nodule consists mainly of exudation cells, of the so-called giant cells, and fatty granules, with more or less broken-down skin elements. Hence in pre-bacteriological days, Lupus was classed by Virchow as a 'granuloma.'

Treatment.—The most essential point in regard to Lupus is an early diagnosis, for if detected when only one or two non-confluent papules are present, it may in all probability be extirpated root and branch. But unfortunately, as it is painless, most parents pay little heed to what they regard as merely an odd blemish, that may pass away in time, and so we are usually not consulted until the disease has spread considerably, and the nodules have become more or less confluent. When, however, they are seen in their initial stage, no time should be lost; and I have found by far the most effectual mode of dealing with them is one which I first employed in 1886, and which I much prefer at this stage to the use of the scoop. My instrument consists of a small cylinder made in two sizes, having diameters of one-tenth and one-fifteenth of an inch respectively, and ending in a sharp cutting edge. Cocaine may be used to anæsthetise the part, but when many nodules have to be removed, I prefer to give ether. By slightly rotating the instrument, pressed firmly over the nodule, the cutting edge is sunk to a depth of a tenth or an eighth of an inch, when the instrument is withdrawn, and firm pressure applied if there be any hæmorrhage. A pair of pointed forceps are then pushed down, and by the aid of a scalpel the entire disk is removed.

When bleeding has quite ceased, the resulting pit is plugged with a small pellet of cotton-wool, soaked in lanoline containing one grain to the ounce of corrosive sublimate thoroughly blended. This dressing is covered with a simple antiseptic plaster, and left undisturbed for two days, after which the ointment is applied on lint.

Contrary to what we might expect, these pits contract and heal in four or five days, leaving only a minute and often imperceptible cicatrix. The surrounding redness gradually fades, and no further treatment is required. At the same time we must keep a close watch over the case for some months subsequently, in case new nodules should appear. The foregoing treatment is based on the probability that each nodule is the nest of a family of pathogenic bacilli—as may, though rarely, be demonstrated by careful microscopic search—from which focus their spores probably disperse centrifugally. Obviously, then, the indication is to extract the nest *en bloc*, and, if possible, poison the spores in the surrounding tissues by the absorption of the germicidal perchloride. This mode of treatment has given me better results than any other, in cases where the nodules had not become confluent. I have removed as many as twenty-seven from one case, with but little cicatricial disfigurement, and the ultimate eradication of the disease. When, however, the nodules have run together, and a whole area is involved, with or without ulceration, such treatment cannot be employed. In such circumstances it is advisable to anæsthetise the patient, and scrape the entire affected area with the sharp scoop.

It is remarkable how friable the affected tissues are, and how resistant are the sound ones. We should, therefore, use the scoop boldly, in spite of the hæmorrhage, which tends to obscure the vision, removing everything that we can get away from the affected area. The raw surface should not be dressed until bleeding has entirely ceased, when the ointment already mentioned may be applied on lint.

Doutrelepont, acting on the germicide theory, has recommended the use of a weak solution of the perchloride—on lint, with guttapercha covering—to be kept constantly applied. I have used this with excellent results, but it is troublesome to apply, especially about the nostrils or lips. Unna speaks highly of the application of a plaster made with salicylic acid, also a germicide, but in my own hands it has not by any means realized my expectations. If, apart from the Lupus, the patient exhibit any apparent debility or want of tone, we should certainly endeavour to invigorate the tissues by cod-liver oil, hypophosphites, good food, and pure air; for, as healthy tissues are probably a less suitable soil for germ development than those which are otherwise, the indication is clear, to get the patient into as sound a state of health as possible. This appears to me to be preferable to poisoning the tissues by the internal administration of mercury, which may no doubt kill off the entire colony of bacilli in time, but at a cost which it may be hard to estimate. For details of a series of twenty-five cases treated on the germicide principle, the reader may consult the monograph on Lupus to which reference has already been made.

Scrofuloderma is a chronic inflammatory condition of the skin, resulting in ulceration, and associated with other marked manifestations of the Scrofulous habit. It results from the necrotic degeneration of exudation-products infiltrating the derma and subdermal tissues.

It is beyond the scope of this little work to enter into the wide pathological question of the exact relationship of Scrofula to Tubercle. In the lesions of both, bacilli apparently identical are found; yet the phenomena of the two diseases present points of dissimilarity, which should make us pause before absolutely accepting the view that they have a common pathogenic factor—the Tubercle bacillus.

Bacteriologists as yet know too little of the possible metamorphoses of bacilli into various types, possessing diverse pathogenic properties, due to subtle influences of food and environment, to say with absolute precision whether or not the bacilli found in perhaps widely dissimilar lesions are, or were once, identical in species. Many distinguished men hold the opinion that the bacillus of Tubercle is also that of Lupus and Scrofula; but even if it were proved that all sprung from a common ancestry, the clinical fact would remain that the phenomena associated with their presence in these three great disease families differ so widely that we are compelled practically to regard them as distinct.

Scrofuloderma is commonly associated with swollen lymphatic glands, but may exist quite apart from glandular abscesses. When exudation has occurred —intra or sub-dermal, or both combined—the resulting-cell products are of low vitality—they degenerate and excite an inflammatory process of a subdued and chronic type in the surrounding tissues.

The overlying surface becomes rosy-red or livid in colour, but nowhere exhibits the nodules which characterize Lupus. There is little if any pain, and fluctuation may or may not be well marked. This condition may persist with but slow perceptible advance for many days or weeks, the derma being gradually tunnelled in numerous channels towards the surface. At last the epidermis ruptures, usually by several apertures, which may then coalesce, and an area of open ulceration be established. The pus discharged from this ulcer is more copious and creamy than we find in the Lupus ulcer—the edges of the sore are ragged and undermined, so that the ulcerating surface is actually larger than the overlapped opening. A probe usually passes readily in various sinuses beneath the skin, or down to subjacent fascia or bone.

Granulation is commonly exuberant and flabby, and healing may progress at one part, while ulceration is only starting at another. One peculiarity of Scrofuloderma is the tendency to form cicatricial bridges or bands across the surface, which are broader at each extremity than in the middle, where they appear like stretched threads of skin. A probe passes readily under these bridges, which remain persistent after all the affected area has healed. When occurring on the face they cause great disfigurement, and we should therefore excise them when healing is complete, a proceeding which causes little or no pain.

Large and irregular areas of the surface may be affected by Scrofuloderma, especially amongst the puny, semi-starved children found in the slums of our large towns.

Diagnosis.—It is not always easy to differentiate between Scrofuloderma and Lupus on the one hand, and hereditary Syphilis on the other—and it is doubtless this ambiguity which has led many observers to regard Scrofula as a form of transmitted Syphilis.

First, as regards its points of difference from Lupus. The general aspect of the scrofulous patient is commonly well marked: fair hair, gray-blue eyes, soft, weak skin; or dark hair, with dirty-gray skin; serrated incisors, usually large joints, and prominent abdomen. Lupus, on the other hand, attacks a large number in whom such signs are entirely wanting.

Secondly—the history. Scrofuloderma, although a chronic disease, is much more rapid in its evolution than Lupus. The latter may have existed as one or two disseminated nodules, almost unchanged, for months or years; it never develops an attack over a wide area in a few weeks, as is frequently the case with Scrofuloderma.

Thirdly—the characters of the lesions. Scrufuloderma never shows the scaliness of Lupus in the pre-ulcerating stage, nor the nodulation and apple-jelly colour of the latter; and when healing begins it is much more rapid than in Lupus, and is generally marked by the formation of cicatricial bridges, which never occur in Lupus.

The chief diagnostic points of difference between Scrofuloderma and hereditary Syphilis are: the malformation of the upper incisor teeth, which, in the latter, show the well-known screwdriver appearance, pointed out by Hutchinson; the coppery-brown pigmentation of the Syphilitic lesions, as compared to the rosy, or lurid blush of Scrofuloderma; the dirty ashen-gray colour of the ulcer in the one; the copious pus and florid granulations of the other. There are cases, however, in which the same individual is the victim of both Syphilis and Scrofula; and it is not impossible that Lupus may be superadded—so that the characters of the lesions become confounded in a most perplexing manner.

Syphilis and Scrofula are much too prevalent in all classes of society to make this dual dyscrasia a phenomenon of great rarity; and it is not surprising that the latter should have been regarded as only a sequela of the former.

As regards the *treatment* of Scrofuloderma, by far the best, in my experience, is to cleanse the diseased surface with a weak solution of corrosive sublimate, to dust it with iodoform, to touch the too florid granulations with solid nitrate of silver as occasion requires, and to cover it with a light antiseptic dressing. But diet and constitutional remedies are all-important. Cod-liver oil, calcium chloride, iodide of iron, hypophosphites; and as generous a diet as the patient's digestive organs are capable of assimilating, together with fresh air, warmth, and sunlight, are, broadly speaking, the most potent means at our command to render the patient's tissues less readily vulnerable.

Prognosis.—Most cases of Scrofuloderma rapidly improve under appropriate treatment, especially if not associated with gland destruction, or diseases of serous membranes or bones. Where these are involved, the prognosis of rapid recovery is much less favourable.

One form of Scrofuloderma is characterized by papillary hypertrophy, which causes warty excrescences and irregular thickening of the epidermis, with curious rugged convolutions. The lumpy epidermis can be readily detached from the papillæ, which are highly vascular. This warty condition is usually unassociated with ulceration; but I have observed it in conjunction with an irregularly ulcerated area on the back of the hand.

Equal parts of liquefied carbolic acid and liniment of iodine form a useful application for these lesions, but in this, as in all other manifestations of Scrofula, constitutional treatment and hygiene are the *sine quâ non* of cure.

Syphilis.

Modes of Origin.—Infants may be the subjects of Syphilis in various ways. If, as seems probable, the spermatozoa may be the vehicle for conveying the specific virus, it is obvious that the fœtus is syphilitic *ab initio.* Or it may be that the maternal ovum is similarly tainted—with a like result.

If, however, the conception has been absolutely pure on the side of both father and mother, the fœtus *in utero* may still be contaminated if the mother acquire Syphilis during her pregnancy. In all these cases the fœtus is liable to death from Syphilis *in utero* at any stage of pregnancy. It may, however, be born alive, and either die in a few days with unmistakable manifestations, or survive—without exhibiting any well-marked signs — for some weeks subsequently. Or a fœtus may be pure up to the time of birth, but contract the disease by direct contact with a specific sore on the genitals of the mother during birth, before the virus has had time to permeate the mother's system and infect the fœtus through the placental circulation.

When the system is fairly infiltrated with Syphilis, the blood of the subject and the discharge from any open sore is capable of infecting another person, if brought in contact with any abrasion of surface, or even with a thin, weak epidermis or mucous membrane.

A sound, healthy epidermis, or mucous membrane, is probably invulnerable, but there is certainly risk of infection from contact with any fluid discharge from the body of a syphilitic subject. Well authenticated cases are all too numerous in which medical men have accidentally acquired this disease, primarily on the fingers, from attending women who were not suspected of being syphilitic, or from incautiously examining lesions of the mucous membrane or skin.

The sores which commonly affect the lips and tongue are highly contagious; and infants may be infected by being kissed by a syphilitic nurse or mother, perhaps after successfully running the gauntlet of birth through recently infected maternal passages. A case is recorded by McCall Anderson in which an adult with a contusion over the orbit submitted to have the skin punctured and sucked by a companion. The latter had syphilitic sores on the lips, and transmitted the disease to his friend, who soon after exhibited a true specific chancre on the seat of puncture.

Vaccination—especially if the minutest quantity of blood mingle with the vaccine-lymph—is capable of conveying Syphilis—a fact which is made the most of by those who do all in their power to encourage free-trade in Small-pox. The fact, however, tells very strongly in favour of the use of calf-lymph, which is certainly incapable of communicating Syphilis; and it should, in any case, impress upon every vaccinator the terrible responsibility that rests upon him to obtain human lymph from perfectly healthy vaccinifers only.

SALAR JUNG

the already described exanthems. In well-marked cases the child appears as if bespattered with dirty water from a large brush, the spots varying in size from a pin-head to a patch of an inch or more.

The cry of the child is generally peculiar, ranging from a metallic squeak to a feeble, hoarse croak, betokening laryngeal involvement. The nails are abortive, cracked, and mis-shapen, and the anus and lips are fissured, or show shallow patches of ulceration. Well-marked cases of this sort are hopeless from the first, and seldom long survive birth.

In another and commoner group we find infants born apparently healthy, which thrive fairly well for several days, or it may be weeks, without exciting suspicion of latent disease. The first symptom to attract attention is usually snuffling of the nose, followed by the peculiar cry above mentioned, with the appearance of *maculæ, papulæ,* lesions of the mucous orifices, and gland induration. If such a subject be otherwise well-formed and strong, it favours the presumption that the fœtus was not syphilitic *ab initio,* but acquired the disease either towards the end of pregnancy, through the placental circulation, or possibly during birth, if the phenomena do not appear for a month or two. As has been said, a pregnancy syphilitic *ab initio* usually results in abortion, and speaking generally, the later the invasion of the Syphilis, the better chance there is of saving the life of the infant. But this must be accepted with many reservations, for there are very many degrees of virulence in the quality of syphilitic virus, or, which practically amounts to the same thing, in the responsiveness of the system exhibited by different individuals. In common with other bacterial diseases, Syphilis thrives most vigorously in virgin soil, and although an adult who has passed through all the stages, or in whom the latest phenomena yet linger, may possibly not be safe against a fresh invasion, the chances are certainly in favour of the second being less markedly mischievous than the first. In every organism there exists a latent repellent force,* which bacterial invasion calls into activity; and this force gains in intensity towards the particular disease which evoked it, though not towards others of a different species, and remains on guard against it, perhaps during the life of the individual organism, or for at least a long period after the invasion has spent its force.

Vaccination is prophylactic against Variola in proportion as it excites this repellent force, and it is a matter of common experience that a second attack of any exanthematous fever is rare for at least a considerable time after the first. There is nothing unreasonable in the hypothesis that this antagonistic force may be to some extent hereditary, and that a community may in the course of many generations become less and less vulnerable to the invasion of any very prevalent bacterial disease. It may be utopian to hope that such a goal as perfect immunity will ever be thus attained; but there is ample evidence to show that the average severity of such diseases is much milder in communities which have long been inured to them, than in others to which it has but recently gained access. If the testimony of old writers be not greatly exaggerated, the average severity of Syphilis when it first made its appearance in Europe in the early years of the fifteenth century was infinitely greater than the average severity of to-day. Bacteria reared for generation after generation in repellent soil, probably grow less and less capable of getting the upper hand, as time goes on; and in countries where some of the ancestors of nearly every living soul have been the subjects of Syphilis, the type is assuredly far milder than in others where the disease is, and has been, comparatively rare. This may perhaps account for the very mild cases of infantile Syphilis that we sometimes encounter; but it is obviously impossible to account in this way for the fact that here and there we meet with cases in which the disease asserts its old malignancy. It seems probable that such cases are derived from a brood reared in a hitherto pure and virgin organism, in which they had regained their baneful vigour. Be this as it may, it is certain that there is Syphilis *and* Syphilis, each varying widely in its several degrees of malignancy.

---

* See article by M. E. Metschnikoff, in the *Journal des Connaissances Médicales*, Aug. 4th, 1887.

Infants may, like their seniors, betray but slight tokens of the disease in its earlier stages, but as time goes on, exhibit others which are as certainly manifestations of it. Condylomata around the anus, ulcers on the mucous membrane of the lips, tongue, fauces, uvula, epiglottis, or larynx, scaly fissuring of the palms and soles, onychitis, gummata in the skin, or periosteum, necrosis of the hard palate, or nasal bones, keratitis, iritis, or retinitis, with a long train of lesions of the internal organs, notably the brain and spinal cord, which in this place we cannot consider in detail, may afflict the child for a quite uncertain period, causing grievous disfigurement, even when it survives the ordeal.

Fortunately infantile Syphilis responds very generally to well-directed *treatment*. It is seldom permissible for a manifestly syphilitic infant to be nursed either by its own mother or a wet nurse. The first is herself battling with the disease, and while she requires to conserve all her own strength, her milk can hardly be of the requisite quality. As regards a healthy wet-nurse, it is unpardonably wrong to expose an unsuspecting woman to the risk of infection from the infant.

It is true that if the nurse or mother be treated with mercury, the child may be brought under the influence of the drug through the medium of the milk; but, all things considered, it is better to feed the child on the bottle and administer remedies in another way. Amongst these remedies, mercury still stands pre-eminent, and there are various ways of administering it. The one most commonly serviceable is by inunction, for which purpose we may use the ordinary mercurial ointment, or the mercurious oleate ointment recommended by Shoemaker. The oleates certainly are more readily absorbed than any other preparations applied by inunction, but the ordinary mercurial ointment has always been satisfactory in my hands. About a drachm of the unguent should be gently and patiently rubbed into the skin every day, a new region being selected in rotation; the abdomen one day, the thorax another, the arms, the thighs, and so round to the abdomen again. This treatment usually begins to tell on the lesions in the course of a week or two, and should be steadily continued for two or three months at least. If, however, the inunction provoke a crop of small pustules, we must intermit it for a time. The skin of some infants is particularly obnoxious to this form of treatment, and it is worse than useless to persevere with it. In such cases, gray powder, gr. ij., may be given daily, or a deep subcutaneous injection containing one-sixtieth of a grain of corrosive sublimate. The latter often yields most satisfactory results; but it is certainly painful, and apt to produce local inflammatory tumefactions, which in the parents' eyes outweigh the less obvious benefits which the treatment confers. Where ulcers exist, they should be *dusted with iodoform*, and protected, where practicable, by gutta percha and lint soaked in a weak solution of boroglyceride, or of corrosive sublimate, $\frac{1}{1000}$. Borax and honey may be applied to sores on the tongue or buccal mucous membrane. The utmost care should be taken in regard to the milk supplied by the bottle, and it is advisable to try the infant with cod-liver oil, beginning with the smallest possible quantity, and gradually increasing the dose if it agrees well.

Limited, of course, by the patient's powers of assimilation, we should make every effort to enrich the blood, which the disease is impoverishing; and we have now at command a very large number of appropriate remedies, such as the syrups of the iodide of iron, compound phosphates, etc., some one of which may be cautiously given, and persevered with if it agree, or discarded for a different one if otherwise.

By this combined treatment we have reasonable grounds for expecting a favourable result; but it is extremely difficult to say when the treatment should be discontinued, and we should be particularly careful to avoid the word "cured" in regard to this disease, which excels all others in its powers of lying latent, and reappearing in a more or less modified form years afterwards.

After a mild mercurial treatment of several months, or perhaps a year, it is advisable to give about five grains, or more, of iodide of sodium, with a few drops of ammonia added to the solution daily, for a like period. This drug has in my hands proved very much less depressant, and more serviceable than the better known iodide of potassium. In one case reported by me in the *Lancet* of September 17th, 1887, a boy of fourteen, whose nasal bones had exfoliated, whose soft palate and fauces were deeply ulcerated, and whose general exhaustion was quite alarming, was given forty-five grains of iodide of sodium daily with the most brilliant results, the appetite and strength reviving, and the lesions assuming a healthy appearance in a few days. After two months, the hideous opening left in his face by the destruction of the nasal bones was closed by a plastic operation, and the boy, who had gained strength and weight, presented a much less ghastly appearance than when he first came under observation. See figures 1, 2, 3.

It is sometimes extremely difficult to diagnose Syphilis in the young, especially if it be crossed and modified by either or both of the other diseases already described, viz., Scrofuloderma and Lupus. The results of treatment are not always reliable evidence of the real character of a doubtful disease; but in some obscure cases of suspected Syphilis we have to rely more or less on this experimental method. In using either mercury or the iodides we should never forget, however, that their effects upon the constitution are far-reaching, profound, and too often baneful; and that while they act as a poison to the bacteria, they are also a poison to the patient. They are to be given only as the least of two evils,

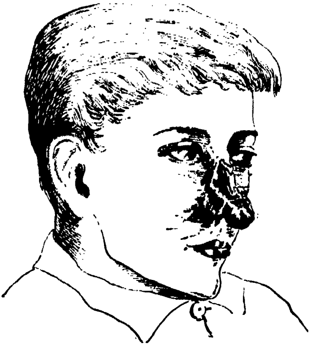

FIG. 1

and are none the less capable of mischief themselves; so that a heavy responsibility rests upon us in employing such double-edged weapons. The specific has yet to be discovered which will eradicate the bacterial brood without risk of injury to the patient; but it is more than doubtful if such a panacea will ever be found; so that we must do our best with the awkward means at our command. Many observers, indeed, have been so impressed by the disastrous results of the reckless exhibition of mercury, that they have waged a bitter crusade against its use in every shape and form, relying almost entirely upon an expectant treatment. In mild cases this is doubtless infinitely better than the wholesale saturation with mercury which once prevailed, but in the

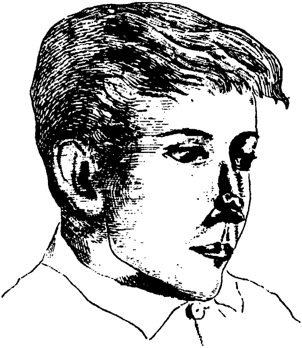

FIG. 2.

majority of cases it is not right to let the disease run on, without an effort to grapple with it.

Each separate case should be taken on its own merits, and the effects of fair, moderate mercurial treatment carefully noted. In some, the patient at once begins to improve, and to gain weight and strength, in which circumstances we should certainly persevere in the course. In others, the treatment is obviously of less effect upon the disease than upon the patient's general health and strength, in which case we must intermit, supplement with tonics, or even be forced to abandon it. Hence the proper treatment of Syphilis is by no means the rule of thumb affair that some suppose it to be ; and while we should endeavour to check the growth of the invading bacteria, we should be careful not to do so

at the price of infiltrating our patient with a poison which sometimes proves quite as hurtful, but rather to invigorate and feed his system so that the soil becomes less congenial to bacterial growth, and the repellent power more developed. Such is the problem presented to us for solution by cases of infant misery, which certainly ought to evoke our profoundest pity.

CHAPTER V.

DISEASES CHARACTERIZED BY CAPILLARY FLUX IN THE GENERAL TISSUES OF THE DERMA.

IT is better to regard one important member of this group—**Eczema**—only as associated with, and not necessarily as resulting from, Capillary Flux.

The latter, indeed, may be only secondary to a break-down of the epidermis covering the affected area, which removes the normal counterpoise to the blood-pressure in the papillæ of the derma. The resulting congestion may, however, play a very prominent part in the subsequent phenomena, quite overshadowing the initial lesion.

The diseases associated with this condition of capillary congestion are **Erythema, Eczema, Dermatitis, Furunculus,** and **Ecthyma,** the first two of which are by far the most common of all forms of skin lesions which affect the infant or early adolescent. Not many infants escape the first in a milder or more severe degree, thanks to the too common senselessness of mothers and nurses, to which allusion has already been made.

In infancy and adolescence more especially, the skin is a pretty fair barometer of the state of the entire organism, and the impaired balance of function of the dermal *nervi vasorum*, of which these various erythematous phenomena are the result, is produced by a great variety of causes, to ascertain which is of much more importance than to invent a new name for every new picture presented by the shifting kaleidoscope Erythema.

As a rule, young people who are prone to blush upon slight inducement betray thereby the readiness with which the balance of the *nervi vasorum* may be disturbed; and accordingly we find that Erythematous patients are generally blushers, and that anger induces in them a mild form of simple Erythema of the face which may last for much longer than a blush.

Disturbed uterine functions in girls, at the commencement of puberty, are a very common factor in inducing Erythema, and if we succeed in regulating these, the other is nearly certain to disappear.

Erythema.

Etiology and Pathology.—Very little irritation, traumatic or reflex, is usually sufficient to excite this affection in a young skin, the implicated area being red, hot, and more or less painful. The ordinary type of Erythema is of this simple character, but the title in conjunction with some descriptive adjective covers a great variety of phenomena. Thus we read of **E. papulatum, circinatum, iris, annulatum, nodosum, neuriticum, punctatum, strophulus, roseola, toxicum, pernio, paratrimma, læve, intertrigo,** etc., names which more or less explain themselves. A minute differential description of these varieties is not of much educational value, in the absence of illustrative clinical cases, so it is more convenient to regard them from the one standpoint of congestion, active or passive, of the derma, with no changes in the epidermis other than those caused by the stimulus of this hyperæmia, such as more rapid shedding of the horny layer, *i.e.*, if the epidermis be normal. If the epidermis be weak it breaks down under the strain, and we have the Erythema transformed into Eczema; but otherwise the epidermis merely becomes drier than usual, and scales off more abundantly, or may even be apparently unaffected altogether. A great many cases of Erythema in the young may be traced to improper feeding, with resulting gastro-enteric disturbance, which is apparently reflected to the dermal *nervi vasorum*. Or the latter may be similarly affected by alterations in the quality of the blood, caused by more or less toxic agents, such as uric acid, the iodine salts, etc.

Diagnosis.—The point of greatest importance is to avoid mistaking any of the varieties of Erythema for any of the exanthemata already described. And in this the temperature is most significant, being seldom raised over a fraction of a degree above normal in Erythema, while in the exanthematous fevers it always ranges higher. So when we find a child with pink spots or blotches, or redness covering a considerable area—redness which temporarily disappears on pressure—we should at once use the thermometer. If the temperature be normal, and we find no cough nor coryza, we may safely decide in favour of Erythema.

We must be on our guard, however, not to mistake a Syphilitic rash for a simple one, and should therefore look carefully for other signs of Syphilis already described, before dismissing it. Erythema is perhaps more vulgarly mis-named Erysipelas than anything else—a mistake which no practitioner should fall into. Even the more severe cases of Erythema, amounting in fact to Dermatitis, accompanied by great heat and swelling of the affected parts, should not be confounded with it. In the first we have but slight general malaise and fever, the redness is not lurid and dusky, the margins are not sharply defined, but shade off, and it does not creep along centrifugally, invading fresh skin. Erysipelas, on the other hand, causes fever, nausea, and headache. The affected area is often intensely tender and hot; it has edges like a map, which spread day by day, and vesication may occur upon the surface.

Varieties.—One of the most common forms of Erythema that we meet with is the **Intertrigo,** which so often occurs in the groin, perinæum, and about the neck and axillæ of infants. The two skin surfaces or folds, which are in these parts usually in apposition, become red, hot, and painful, sometimes exuding a creamy secretion, and running rapidly into Eczema. These cases may generally be traced to irritating dress, to a too stimulating or indigestible dietary, to want of cleanliness; or to a combination of all three. By correcting these errors, washing the affected parts with tepid water, keeping the opposing surfaces apart by a piece of fine lint, dipped in a lotion containing borax, hazeline, and rose-water, and the administration of a few small doses of magnesia, we can generally cure these cases in a few days. When chronic, however, we may have more trouble, as the secretion from the affected surface will often be found to be swarming with micrococci, which, whatever their origin, have certainly the power to perpetuate the irritation in the initial area, and to carry it to new ones. A few dressings with a solution of corrosive sublimate will generally get rid of them. Sometimes lotions do not agree with Intertrigo, and more benefit is derived from dusting the surface with zinc oxide and starch, with boric acid, or with pure fuller's earth or Cimolite. We may also expedite recovery by giving small doses of steel wine, or syrup of the iodide of iron, proportioned to the age, in cases where the patient has suffered long from extensive irritation. In some cases also cod-liver-oil is of signal service.

Another common form of Erythema is that termed **Strophulus,** or, more vulgarly, Red Gum, which is usually developed in infants when teething, and causes no little alarm to inexperienced mothers and nurses.

Although, however, Strophulus is often asserted to be caused by teething irritation, the sequence is not very clear. It is more rational to regard the gum congestion as one manifestation of the same general irritability, of which Strophulus is another; in other words, the eruption of the milk-teeth in an infant which exhibits Strophulus will probably cause more or less congestion of the gums.

As to the skin, the apices of the dermal papillæ show as minute bright red papules, more or less closely aggregated, the intervening areas of skin being also mottled with a ruddy blush. The name is applied by some observers to congested follicles, which lesion is perhaps more, strictly speaking, a form of Lichen than an Erythema, and scarcely, if at all, distinguishable from the early stage of so-called Lichen Eczema.

All that we can affirm is that some of these cases of papular Erythema, or Lichen, run into Eczema, while others remain unchanged for several days or weeks, and spontaneously disappear. The face, arms, and buttocks are the points most commonly affected; but the eruption does not generally cause any perceptible uneasiness to the patient, the temperature being normal, and no other tokens of illness being present.

All that need be done in the way of *treatment* is to bathe the child in tepid water, rendered alkaline by adding half an ounce of bicarbonate of soda to every gallon of water, to administer antacids, and to prevent the patient being over-coddled by excessive clothing. Strict inquiry should be made into the patient's dietary, and the gums should be carefully examined.

Much more persistent and troublesome is the complaint known as **Erythema Pernio**, or **Chilblain,** which chiefly attacks children and youths, although adults are not altogether exempt—and which again becomes more frequent as age advances and the tissues become more vulnerable.

Etiology and Pathology.—Persons of the lymphatic temperament are mostly affected, and cold hands or washing in cold water are apt to induce it. The lesion is essentially a general stasis of the vessels of the derma, occurring at points which are more liable than the rest of the body to be exposed to cold, such as the hands and feet, fingers and toes, ears, nose, or cheeks. As a result, we have more or less burning pain or itching, redness or lividity, swelling and alteration of contour of the affected parts. The epidermis becomes dry, glazed, and fissured; it exfoliates, and in bad cases breaks down altogether, and we have diffuse ulceration. In the aged and weak it may even run on to gangrene. Indeed, we can only regard the mildest cases as Erythema, for the severe ones certainly outstrip that definition, and are true examples of Dermatitis, of which class frost-bite is a type. But even the milder forms give rise to much annoyance, by their constant recurrence upon slight provocation, rendering the patient incapable of using the hand for many purposes, causing lameness, and, if on the face, disfiguring the features in a marked degree.

Treatment.—The first thing to attend to in cases of Chilblain is the temperature of the water used for washing, which should never be cold, and may in some cases be used as hot as can be borne, with great relief. But care must be taken, in using the latter, to dry the part rapidly, and cover it at once with a good non-conducting material; otherwise exposure to the air will produce a bad result, for which the hot water will probably be blamed.

Ringer mentions a hot infusion of celery as having been found highly efficacious in cases where the skin was unbroken ; and I have myself seen relief afforded by an old wife's remedy of rubbing the surface with a slice of onion dipped in whisky. Equal parts of iodine ointment and lanolin form a useful application. It should be thickly spread, and the part dressed with lint, or cotton wadding, wherever the situation does not preclude the use of dressings. We cannot, however, usually apply this to the face or ears, and must therefore, in the latter situations, dress the parts at night with oxide of zinc ointment, to each ounce of which has been added ten minims of pure carbolic acid and twenty minims of oil of lavender. During the day the parts, after washing, may be lightly dabbed over with glycerine jelly. In this connection it is useful to point out that glycerine, which, from its attraction for water, is sometimes invaluable, when used in dilute form or applied to a *moist* surface, has the very opposite effect when applied to the *dry* skin, in some cases leading even to provoke blistering or Eczema.

In general, we shall find that Chilblains yield to such gently stimulating remedies as the above ; but there is a long list of drugs, some of which answer the purpose in cases where others fail. Of these we may mention camphor and benzoin ; the oils of peppermint, cajeput, and other pungent herbs ; collodion and sulphurous acid.

We must not, however, neglect the patient's general condition, which in many, if not in most cases, requires tone. Children who have long been martyrs to Chilblains often rapidly throw off the tendency when given cod-liver-oil, iron, or hypophosphites. Protection from cold, and plenty of exercise to stimulate the circulation, are essential to prevent recurrence. Underclothing as well as stockings and gloves of soft natural wool should be worn ; and the feet should be still further guarded from chill by cork socks worn inside the boots.

Somewhat similar in phenomena, though due to different causes, is the condition known as **Erythema Paratrimma,** or more commonly as **Bed-Sore.**

Etiology and Pathology.—This lesion usually occurs over the sacrum, the heels, and sometimes the shoulders, and is due partly to the affected area being subjected to the pressure of superincumbent weight, and partly to the dependent position initiating blood stasis in patients who are bedridden. It is very apt to be confounded with a far more serious lesion, the **Decubitus**, which occurs in certain diseases of the brain and spinal cord, in which large areas become suddenly gangrenous from trophic paralysis.

Charcot, Joffray, Brown-Séquard, and Samuel have supported the different views that several regions of the brain, or of the cord, were the starting-point of Decubitus; Schwimmer being in favour of the view that it is due to changes in the posterior columns of the cord. The most striking case that I have ever seen occurred in a patient who was *not bedridden,* but who was suffering from Syphilis of the brain and cord, from which he shortly afterwards died. In this case areas of skin some three inches in diameter suddenly sloughed over both the trochanters, as well as over the sacrum.

When bed-sores occur in early life, they betoken a feeble constitution, starvation, or neglect—generally a combination of all three. They may occur, however, in those who are well-nursed, and give rise to no little discomfort.

Treatment. — Sometimes an air or water bed affords the needed relief from pressure, with consequent amelioration of the congestion of the skin covering the lowest points of the recumbent figure; but sometimes all such contrivances are useless. It is of the utmost importance to keep the surface intact, as the establishment of an open ulcer greatly increases the patient's suffering. Any of the applications just mentioned for Chilblain may be employed with advantage, and a large loose mass of cotton wadding should be spread to receive the affected surface. Where actual ulceration or sloughing has occurred, I have found nothing to equal iodoform, alike for destroying fœtor and for promoting healthy granulation. Such sores tend to heal *pari passu* with recovery from the cachectic condition, with which they are commonly associated.

Erythema of a markedly red, blotchy, and pruritic type is apt to be induced in some persons by taking copaiba or cubebs. I have seen two cases in children to whom were administered some patent *Bronchial troches* containing this ingredient; the rash soon disappears when the drug is discontinued. Iodide of potass or of sodium sometimes induces a widely disseminated Erythema, but more frequently causes hard, acne-like papules about the face, neck and shoulders. Both these facts should be remembered when administering iodine salts, as we may otherwise mistake a toxic result of the drug for a manifestation of Syphilis. Discontinuance of the remedy will soon settle the point, should there be any doubt.

Another form of Erythema which it is most desirable, though not always possible, to diagnose at first sight, is that known as **Punctatum**, which so closely resembles the rash of Scarlatina that, if care be not taken, most unnecessary alarm and inconvenience may be caused by a hasty opinion. Bazin, noting the resemblance, has described this eruption as Roseola Scarlatiniforme. The rash is accompanied by slight rise in temperature, which may add to the difficulty of diagnosis, and the pulse may also be rapid. Although the pulse and temperature are *usually* much higher in Scarlatina, mild cases of the latter do occur in which the rise of both is slight; so that, in a doubtful case, we must carefully consider whether the rise is proportionate to the extent and intensity of the eruption.

In Scarlatina, if the rash be well developed, we shall always find a pulse and temperature proportionately high. In Erythema Punctatum the rise is not so high as might be anticipated from the severity of the eruption. Moreover, in the latter the strawberry tongue and bright-red fauces of Scarlatina are absent; neither are there the throat symptoms, tenderness and swelling of the cervical glands, nor any of the complications affecting the conjunctivæ, the middle ear, or the naso-pharynx, some of which are generally present in Scarlatina, at least, if of the graver types.

Professor Thomas, of Leipzig, states that "Erythema may be distinguished from Scarlatina by the fact that it is not widely diffused, being absent on the extremities, neck, and portions of the trunk, and that it spreads in a very irregular manner."

M'Call Anderson, on the other hand, states that it "rapidly spreads, until the whole surface may assume a bright-red colour." My own experience certainly supports the latter view, and I would place far more diagnostic reliance upon the points I have already emphasized, than upon those mentioned by Thomas.

If there be still any doubt, it is best to isolate the patient, and explain that the signs do not yet warrant our deciding that it is not Scarlatina. A day or two, at the most, will enable us to give a decided opinion.

A not very common, but persistently vexatious, variety of Erythema is that which consists at first of raised papules, with a diffuse, rosy red areola, shading off into sound skin. These spots may be very irritable, and provoke scratching, which always aggravates the discomfort; sometimes, however, the itching is but trifling. The papules occur more frequently on the extremities than on the trunk, but I have seen every region of the body affected. They may have a small vesicle in the centre, which dries in the course of a day or two, and the surrounding redness gradually fades. Fresh crops of these spots are apt to succeed the old ones, and to prolong the condition indefinitely. The diet is generally at fault in these cases, and should be carefully criticised. I have seen one case of a child in which the most moderate indulgence in raw fruit provoked an attack.

No little confusion still exists concerning the Erythematous phenomena described by Hebra as "**Multiforme,**" which lie on the border-line of Angioneuroses. It would take us far beyond the limits of this little work to attempt a satisfactory solution of this puzzling problem of classification. Suffice it to say that under this term are included all those cases characterized by the appearance of papules or nodules of a bright or livid red colour, which may enlarge or coalesce, forming map-like areas, which tend to resolve first in the centre, so that the edges become zones. These form many varieties of curve, hence the names Annulatum, Circinatum, Gyratum, etc.

These lesions are prone to attack by preference the dorsa of the hands and feet, but no part of the body is exempt. They especially select regions where the skin is in pretty close relation to bone, as the forehead, nose, etc., and cause no small alarm and disfigurement. They may be mistaken for Tinea Circinata (ringworm of the body), but the microscope will readily demonstrate the identity of the latter. There is not usually much pain or irritation, but in all cases we should examine the general condition of the patient. Congestion of the tonsils or fauces frequently coexists, and a large number of cases occur in subjects suffering from Rheumatism. Schwimmer says: "General diseases of an infectious or toxic nature may be conjoined with Erythema. The agent causing Pleuritis, Endocarditis, Meningitis, etc., may also give rise to the Erythematous Angioneuroses." It is sufficiently obvious, then, that local *treatment* is likely to be only palliative, and that we must carefully endeavour to diagnose the general condition which provokes it.

Change of air and scene, and natural mineral waters, specially selected to meet the particular systemic fault of the patient, are often of the utmost service; ergot, iron, arsenic, salicin, and phosphorus have each proved useful in my hands, but it is impossible to formulate any rules to guide our selection of remedies, which ought to depend on the indications of each individual case. Locally, we may mitigate itching, where it exists, by bathing with a lotion containing hydrocyanic acid or carbolic acid, menthol, etc.; or applying vinolia cream.* Garments of silk or the softest wool should be worn next the affected skin, and sudden variations of temperature avoided as much as possible.

Although much rarer amongst the young than the Lupus already described, with which it is commonly bracketed, we may here briefly allude to the so-called **Lupus Erythematosus**, a disease which is much more correctly designated **Progressive Hyperplastic Erythema.** I prefer this title because the disease has not been proved to have any relation to micro-organisms, and is therefore not entitled to be placed in the same family as Lupus, which undoubtedly has a bacillary origin. As regards its *etiology* we know practically nothing; it occurs in persons of various diatheses as well as in those of none at all. Its persistent progress certainly suggests a bacterial causation, but all efforts to demonstrate this have hitherto been inconclusive, and all that we can yet affirm is that it consists of foci of centrifugal chronic Erythema, with exudation, hyperplasia, and subsequent atrophy and destruction of the epidermis and its appendages.

---

* Prepared by Blondeau and obtainable from Roberts et Cie.

In persistence, it certainly rivals Lupus, and apparently for this reason it is regarded by many as only a variety of that disease; but this constitutes a very unscientific basis of classification, and we might on similar grounds call Lepra a form of Lupus also.

No doubt it somewhat resembles non-ulcerating Lupus, but differs from it in many essential points.

Pathology.—The primary lesion is an exudative Hyperplastic Erythema, with redness and swelling as its constant result. It differs, however, from many other Erythemata in having a fairly well-defined sinuous margin, which is redder than the older central area. The blush of the latter is more or less obscured by a superabundant secretion of sebum, and by an excessive formation of semi-detached, but firmly adherent, minute epidermal scales.

To this extent it resembles the much commoner disease of the sebaceous follicles—Seborrhœa—which led Hebra to give it the name of Congestive Seborrhœa, an unfortunate title, as the Seborrhœa is secondary, and not essential to this disease; as is proved by the fact that it has been known to attack the palms, on which there are no sebaceous follicles. The title originally given to it by Biett—*Erythème Centrifuge*—is certainly much more appropriate. The disease comes on insidiously, is painless, and of slow progress, so that we seldom see its earliest manifestations, and are consulted generally because of the disfigurement. Its favourite site, unfortunately, is the nose, from which it is apt to splay out on either side over the cheeks, like the spread wings of a butterfly.

The affected surface is grayish yellow, greasy, and rough, with minute adherent scales, slightly raised at first, but later on depressed below the level of the sound skin, owing to atrophy of the epidermis and its follicles. Where the scaly, greasy coating is thinnest, the structures beneath are seen to be congested, and sometimes red gyrate lines resembling the margin may be traced meandering over the patch. These are probably the margins of confluent patches, which have not yet completed their healing at the line of contact. In course of time the disease may spread over the entire face, involving the ears and scalp, and destroying the hair-roots and sebaceous follicles.

Prognosis.—Except as the result of treatment, this disease never suppurates, but creeps along for years, causing hideous disfigurement in its course while active, and leaving behind a scarred and hairless epidermal desert when it finally departs.

As I have said, the disease is very rare in early life—much commoner between twenty-five and fifty—but the worst case that I ever met with had begun in a girl at fifteen years of age, and in four years had destroyed fully half of her hair-bearing scalp, the eyebrows, and the normal epidermis of nearly the whole face, ears, and upper part of the neck. It did not, however, destroy the cartilages of either ears, nose, or eyelids, as true Lupus commonly does, when it assails the skin covering those features.

Treatment.—Every known method is more or less unsatisfactory, each one producing perhaps brilliant results in one case, only to fail us entirely in the next. Caustics of different kinds, iodide of mercury, iodine and iodoform; acetic, pyrogallic, salicylic, and carbolic acids, and many other agents have been in turn praised by some, only to be discarded by others.

Multiple incision has been recommended by Volkmann in preference to scraping with the sharp curette; and E. Veiel carries this to the extent of piercing the skin "by hundreds and thousands of punctures arrayed as closely as possible in manifold intersecting lines."

I have never tried this apparently formidable remedy, but have had decidedly good results from deep scraping, and the application of pure carbolic acid to the raw surface. Small, newly-forming patches have also disappeared under the inunction of lanoline containing 10% of extract of ergot, but it is safe to say that there is no universal remedy for this most tedious and disheartening malady.

We have now reached the most prevalent of all skin diseases, or, rather, that group which, collectively, is termed **Eczema**, and which in the young tender skin of the child more especially produces such dire results. Eczema runs riot in some infants, and although at the other extreme of life—old age—it commonly again becomes a more formidable malady than in the intervening period, it is doubtful if it ever is so violent in its attacks, or produces such pitiful spectacles of suffering, as we so often witness in early infancy.

Two factors are pathologically essential to the phenomena of Eczema, and it is questionable which of these should rank first in importance. First, there must be an epidermis weak and vulnerable, prone to disintegrate under stimuli, from within or from without, a delicate, pretty perhaps, but certainly puny envelope. Secondly, the normal tonicity of the bloodvessels in the dermal papillæ must be exhausted and hyperæmia result. This hyperæmia causes increased pressure in the intercellular lymph-spaces of the epidermis, a pressure which a healthy normal epidermis could have withstood, but which the weakly cannot.

The most intense hyperæmia, Erythema, may occur without any effect upon a normally strong epidermis overlying it, beyond, perhaps, a more rapid cell-evolution and shedding of the horny layer; so that it is wrong to regard Eczema as consisting solely of a variety of inflammation. But let the same, or even a less, degree of hyperæmia occur in a subject with a feeble epidermis, and Eczema is the consequence. In some subjects the epidermis seems scarcely able to balance and control the *normal* blood-pressure, and to be constantly breaking down under it. In health there is a perfect balance, but if the controlling pressure of the epidermis be slackened or withdrawn, hyperæmia naturally results, followed by exudation; the overpowered epidermis breaks down, its superficial layers are thrown off, and the prickle cells no longer undergo their normal metamorphosis into the horny integument.

From this it is evident that those unfortunate beings who are afflicted with a weak epidermis are liable to have Eczema provoked either by an increased blood-pressure from within; by the blood containing irritating ingredients, such as uric acid; or by a stimulus from without, producing a like effect. Over-feeding may produce it from within; heat, cold, rough clothing, chemical irritants, etc., may produce it from without.

It is probable that these external stimuli act by causing a paresis of the nerve fibrils governing the process of cornification in the epidermis, which thus ceases to be a coherent envelope, and falls to pieces under the blood-pressure from below.

The skin which is prone to Eczema is not infrequently very beautiful to look upon, being soft, velvety, and fair; it is often associated with fine flaxen hair, blue eyes, and brilliant coral lips. Dark-complexioned subjects are, however, not always exempt, although Eczema is rarer amongst such.

The onset of **Acute Infantile Eczema** is usually rapid, and commonly manifests itself by the appearance of a patch of rose-red papules, punctate or shading off into a general Erythematous blush. The face, scalp, neck, and the flexor surfaces of the extremities are the most common points of invasion. Swelling quickly follows, the epidermis cracks in all directions, lymph exudes freely, the colour of the affected region grows a deeper red, and the clinical picture is complete. The fluid, which exudes rapidly, dries into thick scabs, matting the hair and preventing movements of the face, stiffening the features as if with glue. The sensations of tingling, heat, and itching are probably very severe, as evidenced not only by the poor sufferer's cries, but by the ravages which it makes with its nails, when it is old enough to employ them for the purpose of scratching.

The desire to scratch is a very curious phenomenon, for it is almost universal, and yet it is always hurtful to a delicate skin; not only does it enormously intensify the existing Eczema, but it helps to start it afresh in other parts of the body. Besides, the lesions of Eczema may become the feeding-ground of various bacteria, of which the coccus of Impetigo may be taken as an example, this micro-organism, indeed, appearing to be the direct inciter of Eczema in some subjects. So that, if a patient indulges in scratching, there is the added danger of conveyance of many of these infective agents to hitherto unaffected skin.

Again, the vegetable and animal parasites—Tineæ, Scabies, Pediculi, etc.—are very apt to start Eczema in a subject with a weak epidermis. And one notable point is, that when once started, Eczema is liable to run from place to place over the surface, often symmetrically, and to become chronic when once established. It goes without saying that if it be provoked by any of the above foreign elements, we can never cure the Eczema until we have eliminated the exciting cause. I have myself met with a case of a young man, twenty-three years of age, who suffered from nearly universal Eczema, and who stated that he had so suffered from his early infancy. The cause of his Eczema was scabies, which had been entirely overlooked. The former yielded rapidly to treatment as soon as the latter had been eradicated. It is easy to see how Eczema, when once fairly established, tends to perpetuate itself. The barriers of the epidermis, being once broken down, are not easily made good again, especially as the hyperæmia of the underlying dermal papillæ is stimulated and kept going by exposure to atmospheric influences—heat or cold—to more immediate contact with foreign bodies, or to the irritants produced by the decomposition of the exudation, or the micro-organisms which find a happy hunting-ground therein.

The practitioner is frequently confronted with the fact that Eczema sometimes makes its first appearance a few weeks or months after successful vaccination; the latter, of course, being held by the ignorant to be the cause; on the principle of *post hoc ergo propter hoc*. But as nearly all infants in this country are very properly vaccinated before they are three months old, it follows that nearly all eczematous infants have been vaccinated, just as their births have been registered; but if either vaccination or registration were the exciting cause, we should certainly find Eczema far more common amongst infants than it is; indeed, we should expect to find it all but universal. We have only to turn to the large number of infants who are attacked by Eczema before vaccination, to see how utterly groundless the accusation is. Indeed, unless the attack be unusually acute, vaccination should not be deferred on account of existing Eczema, which I have never seen it aggravate, and which it even sometimes appears to benefit. Protection from the risk of Variola is much too precious a boon to be foregone on account of the prejudiced clamour of those who are utterly ignorant of the pathology of Eczema.

These exciting causes are quite distinct from those already noted, namely, the irritant mode of washing and dressing which is too much in vogue with British mothers and nurses.

There is no little significance in the term which I have heard old country-folk apply to Eczema, viz., a surfeit. The premature giving of animal food, and the ingeniously contrived trash which mothers and nurses often give to infants by way of strengthening them, even before they have cut their first teeth, are undoubtedly the cause of much Infantile Eczema. The mother's milk may be vicious in quality from her own errors of diet, or, if the feeding-bottle be used, the dairy milk may be at fault; or the common mistake be committed of giving concentrated milk too undiluted; and whichever of these exciting causes be at work, we must rectify it before we can hope to produce any good effect by treatment.

Treatment.—The obvious indications are to remove all discoverable irritants from without or from within, to discourage hyperæmia, and to rest the affected parts, so as to permit the routed epidermis to rally and re-form.

He was not a very profound physician who said of the treatment of Eczema, that "the best thing to do was to leave it alone;" for, as was once remarked by a Scotchman of some similar cheap advice, it is "not just exactly possible."

We cannot ignore Eczema, nor put it under a glass shade. It must be kept either covered or uncovered, wet or dry, warm or cool, washed or unwashed; and we are seldom left long in doubt as to whether the course that we are pursuing is beneficial or otherwise.

But as to which course to adopt, it is quite impossible to lay down precise rules. It may, however, be taken for granted that exposure to the air, or to contact with underclothing, is not good for a raw or irritated surface. Various plasters spread on muslin, as recommended by Unna,* are often of great service, by affording a non-conducting covering and shield, quite apart from the therapeutic action of the ingredients of the plaster.

Lotions applied on lint, covered with gutta-percha tissue or oil-silk, are useful, but are troublesome to apply. The tender infantile skin does not bear such strong applications as the adult, and great care must be taken not to over-stimulate it. I have seen good results from lotions containing boracic acid, boroglyceride, tincture of opium, hydrocyanic acid, oxide of zinc, etc., formulæ of which will be found at the end of the book.

---

* Made by Mielek, 27, Dammsthorstrasse, Hamburg, and procurable from Martindale, London.

In any case, the use of lotions requires careful and constant supervision; they should not be continuously applied for more than a few days, as it is not unusual to find their first good effect pass away, and be succeeded by a relapse. Some cases, indeed, resent this form of treatment altogether, and do much better when the affected parts are smothered in dusting-powder; while others do best when treated by ointments. As useful dusting-powders may be mentioned the preparation of fuller's earth known as Cimolite; or rice-powder containing 20% of zinc oleate. Highly scented perfumers' powders should never be used, as the very fact of their composition being kept secret makes it impossible to say that they are free from wholly inappropriate ingredients.

Formulæ of ointments appropriate for Acute Infantile Eczema will be found at the end of the book. Equal parts of lanolin and benzoated lard form a useful basis, to which may be added such active ingredients as ichthyocol, resorcin, boracic acid, oleate of zinc, etc., in proportions suited to the tender skin of the little patient. Camphor or oil of peppermint may be added where there is much itching, and if there is profuse discharge the ointment should be made antiseptic by carbolic acid, 1 to 2%. The action of the latter is twofold, for besides its antiseptic properties, it lessens the intense itching, which is one of the most distressing features of Eczema.

It is often difficult to determine the amount of washing that should be applied to acute Eczema. Where there is slight discharge, or none at all, the dressed surface should be left undisturbed as much as possible; but where the discharge is profuse, and crusts gather quickly and thickly, it is absolutely necessary to get rid of the accumulated *débris*. To apply ointments or lotions to the outside of an impervious crust is obviously perfunctory, and our first care must be to remove all such obstructions from the affected surface. This is best done by rubbing in carbolized olive-oil with a soft shaving-brush, and after a few hours applying a linseed-meal poultice. In a time varying from one to four hours, this should be removed, and the parts washed with warm water in which borax, in the proportion of 15 grains to the fluid ounce has been dissolved. This generally suffices to thoroughly cleanse the surface, but if otherwise, it must be repeated until the desired result is obtained. Hard crusts should never be forcibly dragged off, nor should the surface be scrubbed; but all manipulations should be patiently and gently performed.

All water used for washing acutely eczematous surfaces should be boiled for ten minutes, and allowed to cool to the temperature of the body before using, and soap should on no account be employed. Sometimes even the borax bath irritates the surface, and we have to use emollients of one sort or another. The water strained off after boiling with bran or oatmeal, linseed, etc., is useful for this purpose; but I usually employ cydonia seeds, one drachm of which, boiled in a pint of water and strained, yields a soft mucilaginous liquid, which is very soothing.

The foregoing remedies apply to the most common type of Infantile Eczema; commencing with Erythema, running into Papulation, Exudation, and Pustulation—which may become chronic and last, on and off, with acute relapses, for years, if neglected or badly treated. It is, therefore, very desirable to arrest it as quickly as possible.

While employing the above treatment locally, it is of even greater importance to attack the disease from within. Overfed and plethoric infants should be given one or two grains of gray-powder every night, followed by magnesia in the morning; their diet should be carefully regulated, and in some cases curtailed. Lime-water given with the milk is generally useful, and no soup, beef-tea, or any other preparation of meat, should on any account be allowed. It is marvellous how rapidly eczematous children, who have been surfeited, improve under this simple regime; but as there is always exhaustion after over-action, we must be ready to meet it, or a relapse is pretty sure to be brought about by falling into an opposite extreme. Moreover, if the patient be a child with soft muscles, wrinkled skin, and ill-nourished generally, we must feed rather than starve it—feed it, however, with bland and easily assimilated food, still avoiding the too stimulating, uric-acid-forming animal diet which is so commonly considered a panacea for weakness of all sorts and every age.

The milder preparations of iron perfectly meet medicinal indication, and it is well after the first two or three days to supplement the above treatment by Parrish's syrup, or the syrup ferri iodi, in doses proportioned to the age of the patient, and given twice or thrice daily just after food. As a rule the amounts given to very young children are excessive.

If the iron preparations just mentioned do not effect a marked improvement in a week or two, small but gradually increasing doses of arsenic may be added, provided always that the acute stage has passed.

In ill-fed cases cod-liver oil is simply invaluable, and it may be given to, and will generally be relished by, the youngest infant. Where repugnance to it is insurmountable, as sometimes occurs, we may try sardines as a substitute—though not, of course, to children under three—which in my hands has proved highly satisfactory.

I have found Mellin's food agree remarkably well with some puny infants; and very small doses of Malt Extract are also of great service sometimes.

The preparation which I prefer whenever arsenic is indicated is the liquor arsenici bromati (Ferris), beginning in the case of a young infant with quarter-minim doses, and increasing to one minim.

When a child has once had Eczema on any part covered by the clothing, silk should be worn next the skin for a long time after, or, where the parents cannot afford silk, the finest linen or cotton may be substituted. Woollen underclothing should be worn over the silk, or linen, or cotton, but not next the skin. Residence near the sea is not advisable as a rule, and most eczematously inclined children are liable to suffer from sea-bathing; but if a child has thoroughly recovered, and the weather and the water be warm, the latter may be very cautiously tried. The tonic effect of sea-bathing is so great that we should try if it can be borne by the skin. Should it be, we have gained a point towards increasing the general vigour, but we certainly run some risk of re-exciting the old enemy; and in such a case the sooner the little patient leaves the sea-side the better.

If after exposure to salt sea air, to east wind, or to great solar heat, a child exhibits slight commencing Eczema about the ears, lips, nostrils, or other exposed part, the affected surface should be treated on the lines already indicated *at once*, nothing being more foolish than to leave it alone. True, it may abort of its own accord, but the chances are much more in favour of its spreading, and it is our duty to prevent its doing so, by timely and judicious treatment.

Chronic Infantile Eczema is not of the florid, weeping type, but is represented by the more constant presence of dry scales, the epidermis no longer being a mere macerated pulp bathed in sero-pus, but forming a redundant, scaly, fissured, inelastic covering to the congested derma. The epidermis, in fact, is making a fight, though a clumsy one, to regain its integrity. In such cases I have obtained very good results from an ointment containing the extract of Canadian pine, or pinol, in a medium of benzoated lard and lanolin. Some chronic cases yield quickly to an inunction of coal-tar liquid and red precipitate in the same medium.

But although the drier varieties, commonly chronic, require to be stimulated by such means, and are benefited by the frequent application of super-fatted soap and hot water, we must never forget that the skin of the young is easily provoked to recrudescence of the florid type, and certainly resents the more stimulating applications which are of such signal service to Eczema in the adult.

While Eczema consists in part of a superficial inflammation of the skin, the term **Dermatitis** is applied more particularly to those lesions which affect the deeper dermal plexi as well as the papillary, and in which the epidermis may be routed *en masse*, but is not disintegrated, through its own error of mal-cornification. In other words, the epidermis is not a primary agent in the phenomena, but suffers secondarily from the volcano underneath it in the derma. The disease, described by Von Rittershain as Dermatitis Exfoliativa Infantum, attacking infants of from one to five weeks of age, is certainly rare in this country, and I have never met with a case answering to his description.*

I have, however, met with a case of acute Exfoliative Dermatitis in a girl seven years of age, in which large areas of the body, and especially the limbs, were affected. These areas were raised, deep-red, and scaly, with convex, well-defined margins. The epidermal scales were not profuse and silvery, as in Psoriasis, nor small and branny, as in Pityriasis, but came off in large coherent flakes, like pieces of parchment. Several of the fingers and toes shed their epidermis, together with the nail, in one entire piece. The surface exposed by the shedding was deep red, glistening, but not moist—hot and painful. The epidermis grew over the lesions in a week or more, and remained quite normal in the parts where congestion had subsided and the derma had become normal. Several relapses, however, occurred as regards certain portions, the skin of the soles being twice renewed and twice shed before the final disappearance of the Dermatitis. The onset of the first manifestations, and of the relapses, was marked by pain, fever, and sleeplessness. The case was treated locally by carbolized oil, covered with wadding, and constitutionally by aconite and salines, followed by Fellow's syrup in full doses. Six months after the final disappearance of the lesions the skin was everywhere normal, and the child was in excellent health.

---

* Von Ziemmsen's supplementary volume on 'Skin Diseases,' p. 261.

The general character of the lesions resembled Psoriasis more than anything else, but the acuteness of the attack, the pain and fever, as well as the absence of any scaliness upon the patellæ, or olecranons, rendered the definition of acute Exfoliative Dermatitis much more appropriate.

This case bore a striking resemblance to one at present in my hands—an adult, twenty-eight years of age—who has suffered since he was nine years old with constantly recurring attacks. The disease has long been chronic, and has never entirely left him since boyhood. Every few months a fresh onset occurs, and the patient's general health has completely broken down under prolonged pain, irritation, and sleeplessness. I mention this to illustrate how cautious we should be in venturing a prognosis in the case of a child or young person, for relapses are all too common, and, if frequent and severe, may ultimately wear down the patient and terminate fatally.

Dermatitis the result of cold has already been alluded to under the head of Chilblains. We have now to consider that due to **Burns** and **Scalds,** which may vary from a slight Erythema or blistering, to sloughing and destruction of large areas. The phenomena resulting from burns and scalds are too familiar to require description, and all that concerns us is the treatment appropriate. If a large surface be injured, the shock, pain, and tenderness are proportionately severe, and the first indication, except in the case of a young infant, is to give a stimulant and a hypodermic injection of morphia, always remembering how profoundly young people are affected by the latter, and measuring the dose accordingly. The injured surface should as soon as possible be smeared with carbolized oil and lime-water, equal parts, and enveloped in cotton wadding, to exclude the air and maintain an equable temperature.

A solution of cocaine, or oil of peppermint, if procurable, may be painted over the part before applying the dressing, and affords marked and immediate relief.

Friar's balsam, with carbolic acid 5%, is also very efficacious; it should be painted on thickly and covered with wadding. If the injury be so great that suppuration or sloughing is anticipated, iodoform should be freely dusted over the parts, in addition to any of the above applications, before dressing with the wadding. I know of no drug which is so valuable in controlling suppuration, lessening fœtor, and preventing the necessity of frequent removal of dressings. The less often that the latter are disturbed, the better, especially in the case of children, who naturally dread a process which is generally more or less painful.

Quinine and iron are necessary in severe cases which have rallied from the first shock, to maintain the patient's strength, as it is not unusual for patients to sink and die a week or ten days after the injury. Our prognosis should therefore be guarded in all cases where an extensive surface is involved.

After an uncertain variable period the destroyed tissues separate, and we can estimate the loss involved, that has to be made good by cicatrization. If this area be at all extensive, or situated where contraction must necessarily affect mobility, or cause deformity, skin-grafting should be adopted.

All the textures of the skin are involved in that form of inflammation known as **Phlegmon** or **Cellulitis**, although in mild cases the subcutaneous inflammation may resolve, without a high degree of Dermatitis having resulted.

This condition is very often termed Erysipelas, which in some features it resembles; it is not impossible that the two may co-exist, but they are certainly distinct diseases pathologically, simple Phlegmon being non-contagious.

Sickly, strumous, or rheumatic children are prone to the complaint, whether idiopathically or traumatically. The skin over the affected area is swollen, erythematous, doughy, and painful. There may be some fever, and there is always some malaise. When suppuration has occurred, the pus forces its way to the surface, and ultimately discharges through many perforations, small sloughs of connective tissue being often abundant. When circumscribed, this condition may be termed superficial abscess; but occasionally the borders are ill-defined, and a large diffuse area is burrowed and infiltrated by pus. We may sometimes avert suppuration by absolute rest, and the local application of an ice-bag. or of an evaporating lotion; but if fluctuation is obvious, there is nothing to be gained by delay, and incision is clearly indicated. Several openings may be necessary. It is well to wash the surface beforehand with an antiseptic solution, and the wounds should as far as possible be syringed out with corrosive sublimate solution, 1 to 1,000. Drainage tubes may be necessary, and the whole should then be dusted with iodoform and dressed in wadding. Treated in this way, such cases usually heal rapidly, but the general health always requires attention, cod-liver oil, generous diet, iron, phosphorus, or arsenic being our best allies.

Furunculus, or **Boil**, is much less frequent in early life than after puberty, but it sometimes does occur, and gives rise to no little suffering. Superficially, a boil presents an area of diffuse redness, surrounding a hard, infiltrated swelling, which is centred by a more raised spot, the point at which discharge ultimately occurs. It is caused by a venous stasis in the papillary or deep capillaries of the derma, which results in the necrosis of a portion of tissue whose nutrition is thus interfered with, and which, until it is extruded, acting as an irritant, provokes acute inflammation immediately around it. Pus is formed, the skin overlying is perforated, and the necrosed tissue floated out, after which the inflammation subsides, and the swelling slowly disappears. Occasionally the stasis does not succeed in quite killing any portion of tissue, and though infiltration and a minor degree of inflammation result, suppuration is not established, and we have the phenomenon known as a blind Boil.

These troublesome little swellings often choose a hair follicle for their point of attack, constituting what is known as a **Sty**, where one or more of the Meibomian glands are involved. Perhaps the most painful site, and the one where they attain the largest size, is in the axilla. The nape of the neck, the scalp, behind the ear, the external auditory meatus, and the nostril are also points of predilection.

Boils may be solitary, or occur in successive crops of greater or less number. They are provoked by the presence of other irritating skin lesions, by mechanical or chemical irritants, and in some instances are due to the presence of bacteria; the pus discharged reproducing similar lesions on the same or on another subject.

To the latter class belong the endemic boils prevalent in India, which have lately been investigated by Cunningham. Water dressings, or compresses, and the wet pack are apt to provoke boils—a fact of which full advantage is taken by unscrupulous and impudent quacks, who persuade their victims that the boils are the "working out" of some imaginary disease from the system. Skins upon which boils are thus easily provoked commonly yield a golden harvest to the nimious hydropath.

Treatment.—Small and superficial boils may sometimes be made to resolve by lightly painting with equal parts of carbolic acid and liniment of iodine.

When large, hot, and painful, they should be gently washed with soap and hot water, painted with a 10% solution of cocaine, and the surface when dry thickly coated with collodion. No clothing should touch the boil, which should have a large loose mass of wadding as a covering. Should throbbing and pain continue, dry cold, applied by means of an ice-bag, will afford great relief. If the signs of inflammation show no disposition to resolve after a day or two, and especially if pus is apparent at the centre, we shall save the patient much suffering by free incision. When the necrosed core is found to be but loosely attached, it should be separated and removed, and the cavity syringed with corrosive sublimate solution. The boil should then be dusted freely with iodoform or iodol, and covered with cotton wadding.

Treated on the above lines, the lesion heals with a minimum of suffering, and leaves little or no mark, though the hardness may be slow to disappear. The recurrence of fresh lesions is the provoking feature of this complaint, and it is always necessary to investigate the general condition of the patient and treat it accordingly.

I have sometimes, but not invariably, seen very good results follow the administration of the sulphide of calcium, as recommended by Ringer, in doses of gr. $\frac{1}{10}$, mixed with 2 grains sugar of milk, and given every hour during the acute stage of one or more severe boils.

A Sty may sometimes be dispersed at its initiate by a light pencilling with a 5% solution of argent. nit., with the iodine and carbolic acid already mentioned, or with oleate of mercury 20%. If not arrested, it must run its course, and the surgeon perforce be content with endeavours to mitigate pain. Small poultices of marigold flowers or wet compresses containing tincture of calendula will often effect this purpose. Cocaine in 5% solutions is useful at all stages.

Ecthyma is an inflammatory affection of the skin occurring in children, but no little confusion has arisen amongst dermatologists as to the precise form of lesion to which the name should be applied.

It is thus not easy to define it in terms which would be accepted by all observers, but we may note that the lesion does not attain the dimensions of the larger Furunculi, that it is more superficial, and that it does not contain a necrotic core, but exudes a sero-pus, which dries into a thick, adherent brown scab. There is usually hardness at the base, but this may be absent, and in its early stage it consists of a vesico-pustule. When the scab falls off, the surface has a glazed, red appearance, which lasts for a long time: a slight cicatrix may persist for still longer. Usually several of these pustules occur simultaneously. They chiefly affect the loins, buttocks, and thighs, and, if neglected, fresh crops succeed those which have died away. It is doubtful if Ecthyma be contagious, but I have several times observed two children of the same family synchronously affected.

It usually attacks the poor, dirty, and ill-nourished, and soon disappears under the influence of a generous diet, cod-liver oil, syrup of the iodide of iron, or of hypophosphites. The pustules may be painted in their early stage with collodion containing 10% of iodoform, which prevents excessive ulceration and crust-formation. Where crusts exist, they may be removed by poultices, and the collodion painted over the sore spot.

Simple inflammatory pustules of small size are often developed in cases of Scabies and Eczema, and as a result of uncleanliness, but they call for no special mention in this chapter.

CHAPTER VI.

DISEASES INITIATED BY LESIONS OF THE EPIDERMIS AND ITS INVOLUTIONS.

As noted at the beginning of the preceding chapter, some cases of Eczema might fairly be included in this group, but for the sake of convenience this disease has already been discussed. We shall better comprehend the meaning of the title of this chapter if we remember that the epidermis is not a mere envelope to the derma, but is a complex organ, which plays a most important physiological part in the general economy, and that trophic changes occur in it without any previous lesion of the derma. The view that all epidermal pathological changes are the result of, and secondary to, pathological changes in the derma cannot be maintained. We have already noted that a high degree of capillary congestion may exist in the derma—Erythema—with scarcely any pathological effect upon the overlying epidermis; and, conversely, we find in the familiar hard corn considerable hypertrophy of the epidermis, without the underlying derma having had any causative relation whatever. *The epidermis, then, quite independently of the derma,* is subject to developments and retrogressions—hypertrophic, atrophic, or vicious—and these may initiate inflammatory phenomena in the derma. We shall here deal with those lesions which, affecting the general body of the epidermis, together with its invaginations forming the various glands and follicles, react upon the derma.

Ichthyosis has already been discussed in Chapter II., and is only again mentioned here as a notable example of epidermal hypertrophy without resulting inflammatory changes in the derma.

The group thus defined will include **Psoriasis, Pityriasis, Lichen, Onychosis, Seborrhœa, Acne,** and various **Idroses.** None of these are specially disorders of childhood, but as some of them commonly appear at the time of puberty, and mar many a young face irretrievably, I think it not out of place to notice them here.

Psoriasis is never found in early infancy, but as childhood advances the liability increases. Seven years is the youngest age at which I have met with it. It is, however, much more frequent after, than before puberty.

The typical lesion consists of a rounded spot, or large area with well-defined borders, slightly raised, and covered with white, glistening, crumpled flakes of dry epidermis. These are usually easily detached, when the dermal papillæ become exposed, and readily bleed; the surface of the affected area is of a colour varying from rose-red to raspberry-crimson, or even a coppery liver colour. The epidermis is hypertrophic, but the cell-growth and process of cornification is vicious and abortive. The epidermal cells do not combine to form a horny layer of normal consistency, but shrivelled, friable, inelastic scales, or flakes, which are heaped up into rough masses, like a barnacle-covered rock. While this takes place outwards, other morbid phenomena occur inwards, the epidermal prickle-cells multiplying abnormally, and driving their inter-papillary cones deeply into the derma. We have here the reverse of what obtains in Eczema. The balance of force between derma and epidermis is upset, but it is the epidermis that invades the derma ; and the capillary flux in the dermal papillæ is the direct result of the irritation of this down-growth of the epidermis. This hyperæmia may, indeed, follow so closely upon the initiating invasion of the epidermal cells, as to be the first phenomenon observed, which has given rise to the formerly accepted opinion that the hyperæmia is a primary, and the vicious cornification a secondary phenomenon of Psoriasis. I have, however, carefully watched the advent of new patches, and have detected the scaly desquamation before any hyperæmia was discoverable on removing the surface scales. In a few days, however, these patches developed the usual efflorescence. Moreover, the hyperæmia of the patches often long survives the scaly exfoliation, which we should hardly expect would be the case if it were the cause thereof. But this hyperæmic persistence is no more to be wondered at, if it be the effect of the epidermal misbehaviour, than is the persistence of alveolar hyperplasia after extraction of an offending tooth which has excited inflammation.

One well-marked and almost constant feature in Psoriasis is the fact that, notwithstanding the hyperæmia, no surface exudation from the papillary capillaries takes place, which is unlike what obtains in Eczema. The papillæ themselves are swollen and crowded with exudation cells, yet apparently there is rather a diminution than an excess of the epidermal inter-cellular fluid. It is difficult to account for this satisfactorily, but it may be that the basal and super-basal prickle-cells are so crowded together by their own exuberance, that the intercellular lymph-spaces are blocked up.

As regards the *etiology* nothing definite is known. Wertheim claims to have produced it by the injection of yeast fungus, and of *penicillium glaucum;* but as in a person prone to Psoriasis we can sometimes scratch a figure with a pin, which is shortly after followed by a fairly accurate Psoriatic tracing of the design, I think that Wertheim's conclusion is open to question.

Vivier believes in a parasitic origin ("Annales de Dermatologie," vol. i., p. 237), and others have described as fungus spores what others again regard as mere products of exudation. I am, therefore, constrained to reserve my judgment, considering the parasitic origin very possible, but "not proven." At the same time, its hereditary character is established beyond a doubt.

Slight pressure, such as by kneeling or leaning, will commonly provoke Psoriasis in those so predisposed; hence we generally find it on the elbows and knees, *if anywhere else on the body*—a point of considerable diagnostic value. For some unexplained reason it is far more frequent on the extensor than on the flexor aspect of the limbs. There is a scaly Syphilide which strongly resembles Psoriasis, but which it is, in my opinion, a mistake to term Syphilitic Psoriasis. The latter term should be exclusively reserved for those cases of chronic Psoriasis which contract Syphilis, the phenomena of the latter being grafted on to the former. Wehl, of Berlin, states that Syphilis has no effect upon an existing Psoriasis, an opinion with which I cannot agree. Moreover, there is no reason why a subject of hereditary Syphilis should be invulnerable to ordinary Psoriasis ; but it is wrong, on account of a mere resemblance, to term a true squamous Syphilide Psoriasis at all. It is to such errors that much of the existing confusion in dermatology is due.

Signs, Course and Progress.—The dimensions of the Psoriasis lesion may be only as large as a pin-head—many of such spots being scattered over the surface—and may range from this to large areas a foot or more in diameter; it may invade the scalp and the nails as well as the general skin surface, except the face. The attack usually commences by the appearance of a number of little silvery specks, which gradually enlarge, and coalesce to form the map-like areas, with convex borders, which characterize the later stages of the attack.

After a variable period, the abnormal phenomena commence to disappear at the centre of the spots, the new skin being quite sound and of natural colour. The healthy area enlarges centrifugally until the lesions become rings of ever-narrowing thickness; or where the patches had conjoined, leaving S-shaped or gyrate figures, which gradually narrow and disappear. Psoriasis affecting the nails produces a thick, soft, opaque, manna-like, irregular mass, the skin over the nail-matrix, and the nail-bed itself, being hyperæmic, swollen, and tender. It may affect the palms and soles, but it very rarely does so, except contemporaneously with an attack upon other parts. In an adult, the existence of Psoriasis-like lesions on the palms and soles, *and nowhere else*, should make us very cautious in diagnosis, as the chances are that the case is a Syphilide, and not Psoriasis at all. But this is not infallibly so. I do not, however, remember having ever seen a child with a scaly Syphilide resembling Psoriasis on these parts, the result of hereditary or congenital Syphilis; and the opinion that true Psoriasis is a late manifestation of ancestral Syphilis is not based on very reliable data.

An extensive invasion of Psoriasis may cause some febrile symptoms, but usually the patient appears to be in ordinary health. There is not usually any itching, but there may be some, though never to an extent approaching the symptoms of Eczema.

Treatment.—Our first indication is to differentiate between a fresh attack in the tender skin of a child and the chronic lesions of old or middle-aged people; the vigorous local remedies which are appropriate to the latter being inappropriate to the former.

Amongst *internal* remedies arsenic still holds its own in the estimation of dermatologists. It is not well, however, to employ it in the early stages of Psoriasis, as I have seen the hyperæmia of recent patches distinctly aggravated and itching induced by the wholesale administration of the drug. In a recent attack affecting a child I prefer to limit the animal food, to give two or three grains of gray powder every night at bedtime, and a simple effervescing saline every morning, but not so as to produce too copious evacuations. This, with appropriate local treatment, is generally followed by the disappearance of the disease in three or four weeks. But if no improvement take place after two or three weeks, I then have recourse to the liquor arsenici bromati (Ferris), given in doses of from one quarter minim upwards three times a day, after food.

As regards *local* treatment, I have been induced to abandon chrysophanic acid in young subjects, on account of the effects which I have seen when employed in even a weak ointment—3 grains to the ounce—severe erythema, almost rising to dermatitis, with much painful itching, having resulted. Moreover, it may leave an unsightly and lingering stain on the skin, to say nothing of its doing so on the patient's clothes. So that if we can attain our object by less objectionable means, we ought to leave chrysophanic acid alone, or at least wait until other means have been ineffectually tried. The plan that I usually adopt is to bathe the affected parts with hot water, to rub in ordinary soft soap with a soft brush, such as a tooth-brush, washing again until the scales have been fairly removed. This should be done daily, as the scales reform very rapidly, and prevent the applications about to be mentioned from reaching the lower layers of the epidermis. To apply an ointment to the outside of a thick, dry, dead scale is as absurd as to apply it to the outside of a boot, in the expectation that it will affect the foot within. Yet people who are otherwise presumably intelligent will often do this, unless specially instructed otherwise. When the lesion has been cleared of scales, as far as is possible without causing pain, an ointment of pinol or terebene in a medium of benzoated lard and lanolin should be patiently worked in with the fingers. The first of these has the more agreeable odour of the two. The proportion of the pinol, etc., may be increased every two or three days.

Mild cases, taken early in hand, generally yield to this simple treatment. If obstinate, however, we must employ more stimulating local applications, of which there is a superabundance from which to select. I do not know of anything more generally useful than the *unguentum picis liquidæ*, B.P.; but with young children it is desirable to dilute it by adding more or less lanolin, and unfortunately the odour and staining of the tar are very objectionable to some people. An ointment made with β. naphthol, 5 to 10%, has sometimes given good results, as also has one with pyrogallic acid as its active ingredient.

Carbolic acid, creosote, and a long array of oils have all been extolled in turn, and may be resorted to when others have failed to effect improvement, as is not infrequently the case. The rule to be observed in treating Psoriasis in the young is to begin with a mild preparation, and gradually to increase its strength until the proper degree of stimulation is reached. The indiscriminate use of tar or chrysophanic acid is very apt to incite a painful efflorescence of pustules, or of Erythema, which are wholly unnecessary to the removal of the Psoriasis lesion, and which no practitioner is justified in carelessly provoking.

When the lesion once begins to heal at the centre, it usually rapidly vanishes, and if any permanent mark is left upon the old site, it is the result of the treatment, and not of the disease.

Prognosis.—Although commonly amenable to treatment, or even dying away spontaneously, Psoriasis is almost sure sooner or later to return. In taking the history of old patients I have frequently found that the disease dated from childhood, that the first attack was "cured," but that a fresh one appeared some years after; that this one was succeeded at a shorter interval by a third, and so on, until the disease became chronic and persistent. I know of no disease in which relapses are more likely to occur, sooner or later.

It is therefore our duty to warn the patient's parents that, although cured for the time being, the Psoriasis will in all probability again appear after the lapse of months or years, and to advise that active treatment should be recommenced immediately the earliest lesions are recognised. Though hereditary, it is not contagious, and it does not denote any general weakness nor contamination of system whatever. It is sometimes very necessary to insist upon this, as those who are ignorant of its true nature are apt to cause great domestic trouble and estrangement by groundless suspicions and accusations.

In conclusion I feel called to urge that it is high time that all honest practitioners abandon the title of Lepra as a synonym for Psoriasis. In every other civilized country Lepra is applied exclusively to *Leprosy*, a very much more formidable disease. The title Lepra at once suggests Leprosy even to the ignorant; and it is to be feared that unscrupulous use is made of this fact by certain fraudulent quacks, who rather encourage than disabuse their terror-stricken patients in the belief that their Psoriasis is a variety of that most terrible of diseases—Leprosy Anything which can in any way encourage such a preposterous fallacy ought surely to be given up, and it will then remain for those who persist in retaining it to furnish an honest motive for so doing. I allude to this thus strongly because I have met with patients who have assured me that Dr. So-and-so had told them that they had Leprosy, or that they understood him to say so. It is odd, by the way, how persistently the public, with mulish obstinacy, style practitioners with the lowest possible qualifications 'Dr.,' and deny the title to those holding the degree *de jure;* and how staunchly they support the self-assertive quack, whose blunders are, if possible, more patent than his falsehoods.

Pityriasis consists in an abortive cornification of the horny cells of the epidermis, which do not unite to form the normal elastic horny pavement, but are shed off more or less profusely as small bran-like scales. The morbid process is, however, limited to this desquamation, and there is not the wholesale break-down of the epidermis that occurs in acute Eczema; nor is there the hypertrophy and down-growth that characterize Psoriasis. The derma underneath may be more or less hyperæmic, but there is no surface exudation. There is commonly some itching, but it is never very severe. Pityriasis is very common on the scalp and the nape of the neck, especially in ill-nourished or strumous children.

It is doubtful if the disease designated **Pityriasis Rubra** is wisely so named, being rather a severe form of Dermatitis, of which the shedding of scales is the least important of the phenomena. It seems to be an expression of paresis of the *nervi vasorum*, due to changes in the spinal cord or cerebellum. Cases in support of this view have been reported by Hans von Hebra and Fleischmann.

Ordinary Pityriasis is, however, one of the mildest forms of skin disease, the so-called Rubra being amongst the most severe; and I am not aware that the one ever drifts into the second under any conditions.

Treatment.—Equal parts of oleate of zinc ointment and lanolin make a useful preparation, or carbolized oil if there be any itching. All chafing must be avoided. If the disease appear on the scalp, the skin should be washed with the white of egg beaten up with a teaspoonful of boro-glyceride and one pint of warm water, which will clear the surface of scales. An ointment of pinol, benzoated lard, and lanolin should then be applied. This should be repeated daily, or every other day, at first, until improvement renders washing and inunction at longer intervals only necessary. The general health of children suffering from Pityriasis usually requires attention; cod-liver oil, phosphorus and iron being often indicated.

Onychia is an inflammatory condition of the nail matrix, provoked by vicious changes in the nail itself, or by the invasion of fungi, such as Tinea. Psoriasis affecting the nail is a familiar example of the former. Syphilitic and strumous children are prone to exhibit fissured, stunted, wrinkled nails, the matrices of which show more or less swelling, redness, and pain. Such cases generally quickly subside when dressed with an ointment of iodide of lead, or of mercury, and protected by a finger-stall; but the general health always demands attention and treatment.

It is quite impossible to define any one separate group of pathological conditions to which the title **Lichen** is restricted by dermatologists. It is used to denote a proliferation of the epidermal cells about the mouths of the hair follicles, which, together with the external root-sheath of the hair, build up a small horny cone that imprisons the hair — **Lichen Pilaris.** It is also used to denote flat, polygonal, slightly-elevated, yellowish or red, smooth, sometimes umbilicated, little papules, which after a time may coalesce to form plaques—**Lichen Planus.** The lesions of the latter appear to be connected rather with the coil-ducts than with the hair follicles, and to originate in a proliferation of the prickle-cells of the epidermis, which excites hyperæmia in the papillæ of the derma. There is usually itching or burning pain, but no surface exudation, the lesions being dry, glistening, and slightly scaly; but cornification is not so hypertrophic and abortive as in Psoriasis. One form of Eczema commences with the formation of papules, which has led many observers to designate it a Lichen, while M'Call Anderson, Allan Jamieson, myself and others disapprove of the title in this connection. Another variety, described by Hebra as **Lichen Scrofulosorum**, depends upon the strumous diathesis; and other lesions again are styled **Lichen Tropicus**, prickly heat, and **Lichen Lividus**, a form of Purpura. It would be impossible within the limits of this little work to attempt an analysis of all these very different conditions which bear the common title, and, as many of them are rare before puberty, we need only consider those which are more commonly met with in the young.

The so-called **Lichen Simplex** is merely that irritable papular rash which scratching quickly transforms into Eczema, and it presents a clinical picture wholly unlike the next to be described. It may sometimes be arrested in its early stage by limiting the diet, giving mild saline purgatives and full doses of iron, the irritable parts being bathed with a warm solution of borax, dusted with cimolite, and protected from chafing by cotton wadding.

Lichen Circumscriptus consists of a crop of little florid papules, about one-fifteenth or one-twentieth of an inch in diameter, arranged in curved or circular lines, or in closely aggregated groups. The patches are dry, harsh, and rough to the touch. The papules are a little raised, and consist of a slight hypertrophy of the epidermis, which is made more prominent by the hyperæmia and swelling of the dermal papillæ on which they are seated.

There may be some itching, but it does not incite Eczema. The trunk is more commonly the seat of this lesion than the limbs or face.

Warm baths, oleate of zinc ointment, with camphor, or even cocaine, if the itching is severe, and tonics internally are indicated; but the disease tends to run a slow and comparatively harmless course to spontaneous recovery.

Lichen Marginatus is so named from its marked tendency to grow centrifugally, while the older central parts are fading. The reddened, slightly raised, lichenous strip is always shaped in irregular circular or wavy lines, enclosing a slightly buff-coloured or pigmented area. The whole affected surface is covered with a slight bran-like desquamation of the horny layer. On this account many dermatologists prefer to classify the disease as a Pityriasis under the titles P. Circinata, P. Maculata, or P. Rosea. It is a pity that this confusing plethora of titles should exist, but so long as we are aware that the same disease is meant, it matters very little which title we adopt. The general appearance sometimes closely simulates Ringworm of the body—Tinea Versicolor—but the microscope reveals none of the wavy mycelial threads of *Microsporon Furfur* which are found in the *débris* scraped from the lesion last mentioned.

The affected area may be sponged with a warm solution of boroglyceride, ʒj. to ℥iij., and dressed with oleate of zinc ointment. Arsenic has generally a marked effect upon this disease, which, however, frequently runs a chronic course, in spite of perseverance and variation of treatment.

Lichen Pilaris not infrequently makes its appearance at puberty, when the hair follicles of the body are roused to a new activity. The front and outer aspect of the thighs, legs, and arms seem to be the commonest sites. Crops of conical, hard, horny matter, like minute limpet shells, no larger than a pin-head, are studded over the surface, and on picking one of these off, an imprisoned hair, coiled up like a watch spring, is disclosed. There may be some hyperæmia of the derma underneath, but this is never of any importance, and itching is seldom present to any extent. Frequent friction with soap and hot water, and an ointment containing 5% of carbolic acid, with iron internally, usually suffice to shorten the chronic course of this not very formidable complaint.

I have never met with either **Lichen Planus** or **L. Ruber** in childhood or early life, and such appears to be the general experience. It would therefore be out of place to discuss them here.

It is unfortunate, because misleading, that the titles Lichen Tropicus and L. Urticatus should have been applied to lesions, in which the prickle-cells of the epidermis do not play a leading part, but which are essentially angioneuroses. They will be more conveniently discussed in a future chapter.

Seborrhœa is a title applied to a functional disorder of the sebaceous follicles, and perhaps also of the coil glands. Under normal conditions the skin is slightly unctuous, but there is never a noticeable greasiness upon its surface, provided the most ordinary cleanliness is maintained. In Seborrhœa, however, the follicles exude a vitiated secretion which clings tenaciously to the surface, and entangles and retains the cast-off epidermal scales, forming a tough encrustation of variable thickness, with which are incorporated whatever impurities have settled upon it from without. The epidermal scales and the effete cells of the follicles are sometimes very redundant, giving rise to the form known as dry Seborrhœa, while in another form the oil poured out on the surface is greatly in excess. It is probable that in the latter the coil glands are implicated as well as, or more than, the follicles.

If the crust be carefully dislodged and detached, its under surface will be seen to be studded with little points, corresponding to the dilated mouths of the follicles, whence the greasy mass has sprung. The skin is somewhat redder than usual under the crusts, but is not denuded of epidermis, and does not exude serum or pus.

This tough, dirty, greasy encrustation chiefly affects the scalp, but is also found on the face and the genitals, and, indeed, may occur on any part supplied with follicles.

Biett has recorded one case of universal Seborrhœa, and Veiel speaks of a *physiological* universal Seborrhœa as a characteristic of the negro race!

Newly-born infants are frequently found to have a seborrhœic crust on the scalp, which ordinary washing does not remove. This, at first white, soon becomes a mottled-yellow or brown, and tends to increase in thickness if neglected.

Seborrhœa causes thinning and deterioration of the hair at all ages; and, occurring on the face, gives rise to no little disfigurement. It may even closely simulate the lesion already described as Progressive Hyperplastic Erythema. This disease, however, rarely, if ever, occurs before puberty. When it does exist it is differentiated from Seborrhœa by the circumstance that the hyperæmia of Erythema is much more intense, and that there are always some dry wrinkled flakes of epidermis, the removal of which causes bleeding.

Seborrhœa causes little, if any, itching, and no pain; and it never results in ulceration or permanent change in the skin itself. The first indication in treating Seborrhœa is to remove the accumulated crust, so as to get at the follicles which are at fault. This generally is a work of time and patience. If on the scalp, the whole surface should be soaked in carbolized oil or glycerine at night, and the patient should sleep with an oilskin cap on the head. Next day the surface should be brushed over with pure liquor potassæ, and after ten minutes thoroughly washed with soap and hot water; as much as possible of the crust being removed. This process should be repeated daily and nightly, until the epidermis is thoroughly free from greasy crusts. Instead of being red, the skin under the crusts will often be found of a pale bluish gray, denoting anæmia. The scalp should then be dressed with an ointment of equal parts of benzoated lard and lanolin, with 5% oleate of iron; or lanolin with one-fourth part glycerine of gallic acid. Sometimes a wash is useful. It should be employed by being well rubbed in with a small sponge, containing pinol, hamamelis, lavender, and glycerine, for which see formula given in the appendix. Even after the scalp has remained free for some time, the local application should be continued to prevent relapse, and the head be well shampooed once a week with white of egg and borax.

While not a very serious complaint in itself, Seborrhœa generally betokens an indolent, atonic condition of the system, for which cod-liver oil, arsenic, iron, and phosphorus are appropriate remedies. Fresh air, vigorous exercise, Turkish baths, and sea-bathing are all of them valuable allies to treatment.

Another morbid condition of the sebaceous follicle is that atony which prevents the due expulsion of the sebum, which accumulates inside, and distends the little sac, forming the familiar **Comedo**, vulgarly termed black-head, or flesh-worm, from its fancied resemblance to a maggot. Though the latter name is a misnomer, the follicle is at times the home of a generally innocent parasite, the Demodex Folliculorum, two or three of which live their uneventful lives head-downwards in it. They appear to be of no importance or interest, beyond supplying a subject for illustration to the writers of text-books. Comedones are generally found in adolescents with thick, greasy skins, in the dark complexioned rather than in the fair, but never in children, before the increase of hair-growth that occurs at puberty. The sebaceous follicles are primarily connected with the lubrication of the hairs, and are not in such active employment before as after puberty. The favourite sites of Comedones are the sides and alæ of the nose, the lips and chin, the temples and cheeks, and on the shoulders and back. In mild cases the vigorous application of soap and water, the forcible ejection of the sebum plugs by pressure, and the rubbing in of sulphur ointment, to which some fragrant essential oil, such as lemon or santal, may be added to disguise the odour, is all the treatment that is commonly required. Inveterate cases, which are nearly always accompanied by Acne, are benefited by Turkish baths, sea-bathing, or a course of baths at any of the Spas the waters of which contain sulphur.

Unlike eczematous skins, those which exhibit Comedones require to be stimulated in every available way, open-air exercise and tonics being also indicated. Comedo is often the initial lesion of Acne, although the latter may develop otherwise.

Acne is essentially a perifollicular inflammation, which may be excited by the retained sebum of

Comedo turning rancid and acting as an irritant. But the inflammation may arise without the preliminary stage of Comedo having been passed through ; in other words, the follicle may be excited to inflammation by causes either intra or extra mural. The retained sebum of the Comedo may remain unchanged and harmless, but is very liable to be invaded by putrefactive bacteria, which quickly change it into a rancid, irritating mass. If we express a Comedo, around which a blush of peri-follicular inflammation is just appearing, squeeze it between two cover-slides, stain with fuchsine, and place under a $\frac{1}{12}''$ objective, we shall find it swarming with cocci. Again—though I have never actually demonstrated it—it is conceivable that the death of a *demodex* must give rise to similar decomposition within the follicle. The precise action of the extra mural exciters of Acne are not so easy to trace, although we know in a vague way that faulty digestion and menstrual irregularities have a potent influence in causing or perpetuating it. But why the plexi surrounding the sebaceous follicles should be specially affected, and the dermal papillæ left alone, is not very evident. Moreover, some of the worst cases of Acne that I have seen have been in youths whose health in every other respect was unimpeachable. The new growth of hair that marks the advent of puberty means, of course, increased functional activity in the appendant follicles, and if the vaso-motor mechanism does not respond harmoniously to the new order of things, congestion, stasis, and inflammation are the result.

The Acne lesion may vary from a tiny pimple the size of a mustard-seed—which runs its course and disappears, without leaving any mark, in three or four days—to a hard, inflamed, livid-red pustule half an inch in diameter, which takes many months to resolve, and leaves a permanent cicatrix behind. The lesions may be of any size between the two extremes, and vary in number from a single one to a countless crop, so thickly set that scarcely any sound skin exists between the margins of the pustules. The hardness of the Acne pustule is usually characteristic, and it is difficult to mistake it for any other lesion. Sometimes the contained pus burrows deeply into the derma, and tunnels horizontally, so that the original roundness of the lesion is lost.

If left without treatment, the pustule eventually discharges, and the swelling, hardness, and redness very slowly disappear, tending rather to chronic perpetuation. Meanwhile fresh pustules are forming, so that in course of time the affected area becomes one nodulated mass of red or livid spots, which cause most terrible disfigurement when, as commonly occurs, the face is the site of the disease. The hardness of the Acne pustule is caused by capillary exudation, and this, in turn, maintains the hyperæmia, a vicious circle which rather inclines to perpetuity than to spontaneous resolution.

By far the most rapid, effective, and complexion-saving mode of treatment is aimed at the break-up of this pathological arrangement. My usual mode of proceeding is as follows: The affected area—generally the face or shoulders—is bathed for ten minutes with water as hot as can be borne, gently dried, and the pustules, if deep-seated and tender, brushed with a 10% solution of cocaine. After a few minutes, each one is transfixed and opened up by a fine narrow-bladed tenotomy needle, gentle pressure with a hot sponge removing the pus. Bleeding should be encouraged by bathing with hot water, to empty the congested vessels. Sometimes, on incising large nodules, an amber-coloured serum exudes, showing that we have only entered the zone of exudation, and have not severed the congested plexus. The incision must in this case be carried deeper, till free bleeding results, and the parts again bathed with hot water. A few hours later, or on the following day, each spot should be carefully painted with liquor epispasticus, and a few minutes after, the surface may be lightly smeared with cold cream, and covered where practicable with wadding. Two or three days suffice for the effects of the minute blisters to pass away, when the Acne spots will usually be found to have markedly decreased in size, hardness, and redness. Ointments, lotions, and bathing may be required to complete the disappearance of the spots treated in this way, but their subsequent cure is commonly rapid. This procedure may seem unnecessarily harsh, but it accomplishes in a few days or weeks, what other modes take many months to do, and reduces to a minimum the risk of permanent marking of the skin. And this, in the case of a young female, may be of the utmost importance to her future.

In a large proportion of cases, however, we find that fresh crops keep coming on, and that we require to puncture not once, but upon many occasions. Touching the top of the indurated nodules with acid nitrate of mercury has been highly praised in some quarters; but, in my experience, it requires to be done with the greatest possible care, as a permanent cicatrix is nearly sure to follow the application of more than an infinitesimal quantity.

Meanwhile the whole affected area requires careful and continuous local treatment, for there is certainly no royal road to curing Acne. Amongst many similar lotions, those which have proved serviceable in my hands have contained :

Corrosive sublimate, carbolic acid, or bismuth and zinc, each with glycerine and lavender or cajeput; while amongst ointments may be named the oleate of iron or the iodide of sulphur, in a medium of benzoated lard and lanolin. Iodoform ointment is also often very beneficial, but its odour is generally strongly objected to. Iodol may be substituted. Forms for these and other preparations are appended at the end of this little work. As a rule, we may require to vary the application from time to time.

The system ought to be thoroughly examined, and any defects brought under treatment. Adolescent Acne, occurring from fourteen up to two or three-and-twenty, is not to be treated on quite the same lines as that which occurs in plethoric, free-living, middle-aged or elderly people. At this early age we have not to deal with a constitution affected by over-feeding and over-drinking, or exhausted by long continued menorrhagia or leucorrhœa, but rather with one that requires rousing. Sea air and sea-bathing, a generous diet, abundance of exercise, and small morning doses of Carlsbad or Friedrichshalle water largely diluted, with full doses of iron and hypophosphites, steadily persevered with, generally succeed in conquering the acneic habit. Yet it must be confessed that all our resources sometimes fail, and that the disease lingers on, to the great annoyance of the patient.

We must not forget that an artificial Acne is induced in some patients by the administration of bromides or iodides, and the local application of tar; which persists as long as the cause is in operation. It is sufficient evidence of how little the true causal relation between the sexual functions and Acne is understood, that, while some observers have regarded the disease as an evidence of sexual purity, others have declared it to be evidence of the reverse. The latter suggestion is as unjustifiable as it is cruel.

It is hardly necessary to describe at length the different **Idroses**, or affections of the sweat-glands or pores; because we rarely meet with these in the young, and they are far more characteristic of adult life.

Still, children may suffer from **Sudamina**—a crop of minute vesicles, caused by the blocking of sweat-pores, and the consequent elevation of the horny layer of the epidermis, which comes on during the course of some more important febrile disorder. It is of no clinical importance, and requires no special treatment, being of short duration.

Localized excess of secretion—**Ephidrosis**—occasionally affects the palms of children, which become persistently moist and clammy. Apart from attention to the general health, this symptom may be controlled by repeated bathing with methylated spirit, containing tannic acid, five grains to an ounce, or corrosive sublimate, half a grain to an ounce of water, and dusting with cimolite.

General Hyperidrosis is always symptomatic of some systemic atony or of some exhausting disease, it therefore hardly falls within the scope of our subject.

Dysidrosis, or **Cheiropompholyx**, is an acute inflammation of the coil glands and ducts, which usually affects the palms of the hands, raising the thick, horny layer into vesicles, or bullæ. It is a very painful affection, and liable to relapse; but the few cases that I have met with did not occur in children or young people. My experience has been the same in regard to **Bromidrosis**, or fœtid perspiration.

CHAPTER VII.

NEUROSES.

IT is by no means easy to draw a hard and fast line between inflammatory and neurotic lesions; and endless disputes have taken place in classifying disorders under one head or the other. Paresis of the *nervi vasorum papillæ* causes Erythema, which may thus be called a neurotic affection; but this, in turn, would lead us to regard all congestions as neurotic, which would be inconvenient. So, without in the least implying that others might not claim a place in this division instead of being placed elsewhere, I shall limit the list of neuroses to the following disorders, viz., **Pruritus, Urticaria, Prurigo, Herpes, Leucoderma,** and **Alopecia Areata.**

Pruritus, or Itching, is a symptom of so many skin disorders that it is difficult to dissociate it from others, and to conceive a morbid hyperæsthesia pure and simple. The more so, as the scratching which the itching provokes is prone to initiate other lesions, in the phenomena of which the original neurosis is apt to be recognised as a result, and not as the prompter of the cause.

It is very certain that Pruritus may exist without any inflammatory lesions, and also that the latter may exist without giving rise to the former.

Some children, and even adults, have cutaneous sensory nerves that respond to stimuli, direct or reflex, in an altogether exaggerated manner; the slightest irritation at one part of the surface provoking the most intense itching in other parts—generally limited, however, to those which are habitually clothed; the face and hands being free. I think it more than likely—especially considering the needlessly hirsute flannel in which some new-born infants are swathed—that the apparently causeless paroxysms of screaming, with which the nursery too often resounds, are due to Pruritus. When the infant grows older it learns the evil habit of using its nails, and so attracts the attention of the nurse; but when very young it has no chance of getting at its own skin, even if it had acquired voluntary power over its hands, and so it has to endure the suffering—not, by any means, in silence—as best it can.

Pruritus may be excited by toxæmia—such as icterus, diabetes, etc., and it is probable that uric acid plays a similar rôle. Intestinal worms may cause Pruritus in children, the anus and genitals being chiefly affected. When occurring in the last-named situation, relief of the irritation by rubbing has but too often the unfortunate result of a premature development of sexual appetite.

It is thus evident that a most thorough and exhaustive examination of a case is necessary, and that general *treatment* will entirely depend upon what we presume to be the morbid conditions of which Pruritus is the expression. Locally, we must enjoin strict cleanliness, cold bathing, and the use of lotions or ointments, containing alcohol, carbolic acid, borax, thymol, camphor, etc. Gently rubbing with a menthol cone, or painting with the ordinary oil of peppermint, sometimes allays the itching when other means fail. Hydrocyanic acid, veratria, aconite, are also useful as palliatives; but we are sometimes baffled for some time before hitting upon the preparation which gives the most relief to a particular case. Cimolite should be freely used to keep the dress from exciting the parts, and the softest available materials only should be worn next to the skin. Although Pruritus does occur in this way, scarcely—if at all—associated with visible changes in the skin, it is more commonly found in such connection, when another title, appropriate to these visible changes, is applied to the joint phenomena, and the Pruritus is regarded as only a symptom. How far such nomenclature is pathologically correct need not be here discussed.

Urticaria consists essentially of a circumscribed œdema of the papillary layer of the derma, which raises the epidermis in what are commonly called wheals. These are usually redder than the normal skin round the margins, but are paler than the normal skin near the centres. Wheals are always slightly elevated, and are harder than the normal skin; they give a peculiar marbled appearance to the surface, and are the seat of more or less intense Pruritus.

Urticaria may be excited by irritants from without, or, reflexly, from within the body; and it may consist of a single acute evanescent attack; or, the vicious habit once established, it may become recurrent. We can seldom speak of the Urticaria as chronic, because there are always well-marked remissions, if not complete intermissions of the phenomena, which, unless perpetuated by scratching, or the continued application of the irritant which started it, tend to disappear in a few hours. The wheal of Urticaria differs from an inflammatory swelling in that the contraction and subsequent dilatation of the vessels are unaccompanied by any change in the walls of the vessels, so that the block to the circulation is but temporary, and rapidly disappears when the vessels recover their normal tone.

Among the principal external causes of Urticaria may be mentioned poisoning by the common stinging-nettle—whence the title is derived—by certain species of medusæ, or jelly-fish, when bathing, and the bites of various insects—gnats, fleas, bugs, etc. In some persons the Urticaria caused by these last named pests is so severe, as to mask for the time being the inflammatory lesions which follow the bite in due course. Thus, within a few minutes of being bitten, such a subject will exhibit an irregularly rounded or oval papule, raised an eighth of an inch above the surface, half an inch or an inch in its greatest diameter, pale white in colour, erythematous round the margin, hard when pressed, and intensely pruritic. When these phenomena disappear, which they commonly do in an hour or two, the puncture becomes more visible, surrounded by a bright blush. The puncture rapidly closes, and is succeeded by a vesicle, seated on an inflamed base, which takes three or four days to resolve.

The poison of the jelly-fish causes most severe Urticaria, and if a large surface of the body has been brought in contact with one of these common denizens of our summer seas, the most terrible suffering may ensue. Children should be particularly cautioned against playing with them when bathing, especially those that have long trailing filaments extending from their under surface.

Urticaria, again, may be provoked by ingesta, whether from absorption into the blood of some toxic material, or from reflex irritation caused by indigestion; or, again, not infrequently as an evidence of the lithic acid diathesis.

Certain articles of diet—notably fish, shell-fish, pickles, raw fruit, curry, etc.—produce Urticaria more or less markedly in certain persons. This may or may not be accompanied by acute gastric pain, nausea, and pyrexia.

Some sufferers, indeed, have such a tendency this way, that it is difficult to discover a dietary which will not provoke it; and the ingestion of food is followed by Urticaria with such regular recurrence, that the tendency may certainly be regarded as chronic. Unfortunately, the desire to scratch is often irresistible, and the temporary relief which this affords is succeeded by an increase of the Pruritus, and by true inflammatory lesions produced by the violent friction and tearing of the nails.

Closely allied to, if not indeed to be regarded as only a variety of Urticaria, is the so-called **Lichen Urticatus,** which is marked by the efflorescence of thickly disseminated little papules, the seat of intense Pruritus.

To designate this phenomenon a Lichen appears to me to be misleading, if by Lichen we understand that group already described, which is initiated by increased cell-growth in the epidermis and its follicles. A true Lichen papule consists of an increased number of epidermal cells, *plus* the exudation which they have provoked; but the papule of Lichen Urticatus has no epidermal hypertrophy in its composition at all; it is comparatively evanescent, and, when allowed to run its course undisturbed by scratching, disappears without any trophic implication of the epidermis from first to last.

When scratched and irritated, these papules expand into wheals, and we have a pathological picture hardly, if at all, to be distinguished from Urticaria.

So, too, with the phenomena called **Lichen Tropicus,** or **Prickly Heat,** which, while it may fairly be classed among the inflammatory affections, has surely but little title to be called a Lichen. This acute disorder is characterized by the sudden appearance over nearly the whole body, except the face and hands, of minute, raised papules, intensely red, and exquisitely pruritic. It is the predominance of the latter feature that entitles us, for convenience' sake, to classify it among the Neuroses. It is not very certain whether these red punctate spots correspond to congested plexi of the hair follicles, or to congested dermal papillæ; but the accompanying Pruritus is far and away beyond what accompanies any ordinary congestion of either of these structures. And in this, as in the last, there is no increase of epidermal cells, whether initial or secondary. It is a common complaint in tropical countries, and occasionally occurs at home, but it affects adults more often than the young.

The treatment of all these distressing forms of skin hyperæsthesia consists in those remedies already mentioned as applicable to Pruritus. Cold, whether applied by means of an ice-bag or a bath, sometimes affords marked relief to the maddening irritation, having at the same time a sedative and a tonic effect. But the temporary relief is less of a problem than the radical cure of the proclivity, which often depends on causes beyond our ken, or which, owing to the patient's circumstances, it is impossible to *prevent.*

The name **Prurigo**, after being applied with much confusion to divers of the phenomena just discussed, has been definitely restricted to a disease which is far more common in central Europe than in Great Britain.

M'Call Anderson believes, *however*, that genuine Prurigo is more common in this country than is generally supposed, being apt to be mistaken for other affections. Typical cases, however, are certainly rare.

The symptoms and course of Prurigo are thus described by Schwimmer: "The disease we call Prurigo consists in the presence, mostly on the exterior surfaces of the extremities and less on the trunk, of numerous discrete nodules, having at first the colour of the skin, and gradually darkening; they are from a millet to a hemp seed in size, and occasion violent itching. After a brief existence, they are freely intermingled with excoriated efflorescences. The disease appears in earliest infancy, and has a chronic course; it is nearly always preceded by wheal-like efflorescences, which are never absent, besides, in relapses of the disease. The Prurigo nodules are distinguished from the nodular eruptions of Eczema Papulosa, Erythema, and Scabies, chiefly by not being transformed into other efflorescences, and by the fact that throughout their whole existence they change neither into vesicles nor crusts, but appear, even if the affection lasts for years, mostly as flat, slightly reddened elevations; or they may perish in the subsequently forming infiltration of the skin in case the disease extends greatly. The deeper layers of the cutis form the seat of the nodules, and thus it happens that the intense subjective sensations are often perceived before changes can be seen in the integument. *This fact probably made Prurigo appear identical with Pruritus;* but if such a case be followed in its further course, the difference in the affection becomes marked, and while in Pruritus the skin seems altered at most by excoriations, in Prurigo the nodules manifest themselves early, and greatly multiply. The most prominent symptom in Prurigo is the continuous violent itching, which may reach so high a degree that the patients suffer the most unbearable nervous complications, and cases are known in which unfortunate sufferers have thereby been driven to insanity and suicide."

The nodules which characterize the malady thus graphically described appear to be due to an exudation which chiefly centres around the hair follicles and sebaceous glands, accompanied by hypertrophy of the smooth muscular fibres—*arrectores pilorum*—and of the overlying epidermis. As these changes do not, however, suffice of themselves to account for the terrible Pruritus which accompanies them, we must consider the disease as a dual Neurosis—a trophic and a sensory one. Unlike the evanescent efflorescences of Urticaria, the nodules of Prurigo are persistent, and the skin becomes dingy, inelastic, pigmented, and, in a word, cachectic. But Urticaria is a frequent feature of the disease, evanescent wheals coming and going amongst the papules which may remain although the wheals have temporarily disappeared.

Auspitz notes the constant occurrence of Urticaria early in the attacks of Prurigo in childhood.

Scratching only tends to intensify and perpetuate the Urticaria, and to induce inflammatory lesions as well, so that our great indication for *treatment* is to minimize the Pruritus, which renders resistance to the impulse to scratch well-nigh impossible. Frequent and prolonged alkaline baths of warm water, and the use of some of the applications already mentioned for Pruritus, should be diligently practised. Tar-water is highly praised as a remedy by Schwimmer, and an ointment containing 5% β. naphthol is recommended by Kaposi. M'Call Anderson recommends inunction with equal parts of soft-soap, alcohol, and oil of cade ; and preparations containing sulphur have been advocated by others. Amongst internal remedies may be mentioned arsenic, carbolic acid in the form of pill, cod-liver oil, and the subcutaneous injection of pilocarpine and of ergotin. The disease is most obstinate, and taxes the patience and resources of the physician to the uttermost, but it is of the greatest importance that it be prevented drifting into chronic permanency. The longer that the vicious excitability of the cutaneous nerves continues unchecked, the more stereotyped does it become ; and, although remissions may occur spontaneously during the most vigorous years of life, it is sure to return with its original, or with even greater potency, as soon as the vital powers begin to flag.

The practical lesson to be learned from all these neuroses just considered is that any child which exhibits a habit of scratching, especially when in bed, should have its skin carefully examined, and every effort should be made to bring its sensibility to normal equilibrium, a problem which, unfortunately, often baffles physicians of the widest experience.

The lesion of **Herpes** consists of a single vesicle or a crop of vesicles, seated upon an inflammatory area, which runs an acute course of several days' duration, and is accompanied by more or less pain of a stinging or burning character. The Herpes vesicle is small, sometimes confluent, but not exceeding a hemp-seed in size when discrete. Its contents become sero-purulent in two or three days, and dry into a raised buff-coloured crust, which adheres to the inflamed base for three or four days longer. All that is at present known as to the etiology of Herpes is that it depends on a localized paresis of the trophic nerve fibrils of the skin; the group of vesicles not infrequently, in one well-known form—Zoster—marking the course of an intercostal or other nerve, and being unilateral. Herpes is apt to accompany diseases of a general febrile character, but is not symptomatic of any such. Except in severe and extensive examples of Zoster it is rather an annoying than a serious disease; and, unless fresh crops continue to assail the patient, we can nearly always be sure of complete recovery in a few days.

Perhaps the commonest site is about the lips, where it gives rise to some temporary disfigurement and discomfort. It also effloresces on other parts of the face, and occasionally on the buccal mucous membrane, the tongue and fauces, in which latter positions its vesicular character is quickly lost, and the lesion closely resembles aphthæ.

Herpes also is prone to attack the prepuce of the male, and the vulva of the female; and when it occurs in these situations the utmost caution is necessary in diagnosis, as we may have to decide whether the patient is suffering from this innocent disorder or from a commencing specific ulcer. Where doubt exists we should withhold our opinion. On no account should we apply caustic of any kind, but only the simplest soothing applications —

such as borax ointment, or Hazeline—and wait. A week will decide the diagnosis, for in that time the lesion will have nearly, if not quite, disappeared, if it be herpetic; it will have developed into a purulent sore if it be specific. It is easy to imagine what serious charges of immorality or of criminal assault may be conjured up by our expressed opinion in such a case, so that we cannot be too cautious in giving it.

The most serious and painful form of Herpes is that known as **Zoster**, or **Zona**, which is generally accompanied by severe neuralgia, and is due to nerve lesions occurring at a distance from the affected area. The spinal cord, or the intervertebral ganglia, have been found sclerosed or inflamed, post-mortem, in cases which died during an attack of Zoster.

A severe case of Zoster may thus be significant of much more than its own local effects, and be but one expression of deeper lesions which far outstrip it in importance.

Hebra divided Zoster into seven varieties, according to site; carefully tracing the particular nerves involved in each region.

Zoster, in whatever region, is almost invariably preceded by malaise and local neuralgia, which increase when the crop of vesicles appears, and may cause sleeplessness and great general wretchedness. Although the first crop usually fades in a week or more, fresh ones are apt to appear along the course of the implicated nerve, and this succession may continue for a month, or even longer.

Another and rare variety of Herpes is that known as **Herpes Iris**, which usually affects the back of the hand or foot, and forms rings of vesicles around a central one—several such rings occurring in one case. The periphery of these lesions is marked by a play of colours—whence the name—subdued red, yellow, violet, and green being traceable. It is apt to be successive, and to last for several weeks.

Treatment of all forms of Herpes consists in keeping the parts free from irritation by scratching, subduing pain by local anodynes, or, if very severe, by morphia injections. Painting with collodion, or compound tincture of benzoin, containing 5% carbolic acid, and covering with cotton-wool, sometimes suffices to keep the lesions quiet while their course is being run. Cocaine, aconite, or veratria, in ointment, may be gently rubbed into the affected parts if the stinging pain be severe—care being taken not to break the vesicles nor to apply the ointment to a raw surface. Dusting with cimolite suffices for mild cases.

No special internal treatment is indicated for Herpes *per se*, but we often find that the patient's general health is affected, and requires tonic treatment, by arsenic, iron, or quinine.

In leaving the subject of Herpes, I note, merely on purpose to condemn, the misleading and silly application of the name Herpes Tonsurans to an essentially parasitic disease—Tinea Tonsurans—merely because vesicles constitute one of the phenomena of the latter.

Leucoderma is a trophic irregularity in the deposition of pigment in the skin, which causes a nap-like, piebald appearance of the surface. It is unaccompanied by other trophic changes, or abnormality of any kind in the skin; so that its sole unpleasantness consists in the disfigurement.

The affected area is either waxy white or pale pink n colour, and the irregular margin has generally an appearance as if the brown pigment belonging to the blanched area had been washed back to it, and accumulated there in unusual quantity. Sometimes this increased pigmentation of the margin is not apparent, and it has been stated that there is never any real increase, but that the sudden contrast between the normally pigmented skin and the blanched area gives the margin a false appearance of being more deeply pigmented. I have, however, frequently seen cases in which, by covering the blanched patch, the possibility of such optical illusion was removed, when the normal colour of the skin could be observed to deepen greatly in tone as the margin was approached, the darkest of all being just at the border-line of demarcation from the white patch. Where hairy parts are involved, the hair grows white also. It is not common in childhood, and indeed is a rare affection generally. It usually runs a persistent course, although it may slowly subside spontaneously, and it is very doubtful if any treatment has an appreciable effect upon it. Nervine tonics, such as phosphorus, strychnine, arsenic, etc., may be tried, but we cannot honestly claim to anticipate a certain or even a probable improvement.

No one is likely to mistake Leucoderma for Lepra, if the general health and sensibility of the skin be taken into account, but it has occasionally been mistaken for Tinea Versicolor, a parasitic disease which will be described in the next chapter. The latter, however, is characterized by minute scales and *débris*, which are readily scraped off, and which exhibit the fungus *Microsporon furfur* under the microscope. It is generally the seat of some itching, a symptom which is never found in Leucoderma. We are generally, if not invariably, asked some leading questions in cases of Leucoderma, the patient, or rather some charitable relative or friend, being firmly persuaded that it is the result of a "blood disease," Syphilis, of course, being insinuated. It is obviously our duty to dispel these fallacies, clearly, firmly, and unambiguously, and to insist upon the innocent and innocuous nature of this affection.

Per se, Leucoderma is only a blemish, but it may be found in co-existence with neuroses implicating deeper and more vital organs than the skin; so that it is necessary to examine the patient's general condition very carefully in such cases. We may, indeed, find nothing abnormal, but I have met with one case in which Leucoderma preceded by several months well-marked signs of Myelitis, which ended fatally. The name **Vitiligo** is retained by some writers as a synonym for Leucoderma, but possesses no apparent advantage of expression.

Alopecia Areata consists of one or more circular or ovoid patches on the scalp, absolutely destitute of hair, the skin of which is white, glazed, smooth, and somewhat depressed. The margin is abrupt, and the hairs which grow up to it, though sometimes loose, are normal in length and appearance. A few short stumps of broken hairs may, however, be found occasionally. This affection is quite painless, and the patient usually discovers it suddenly as *un fait accompli*, so that it is hard to say what are the premonitory or earliest signs of the lesion. No little controversy has arisen in regard to the etiology of these ivory-like discs of baldness, some maintaining that all are neurotic, others that all are parasitic.

Amongst those who support the former hypothesis may be mentioned Von Bärensprung, Erasmus Wilson, M'Call Anderson, etc., while the parasitic theory finds favour with Thin, Tilbury Fox, Hardy, Hutchinson, etc.

The point is very difficult to decide, for on the one hand we find cases following and apparently connected with cerebral injury, or neuralgia, and we may search in vain through a large number without finding any abnormal parasite; while on the other, instances have been recorded in which children attending the same school have been progressively attacked, and some cases unquestionably exhibit parasitic growths. Whether the latter are really pathogenic is questionable, as I am not aware that the parasite has ever been successfully grafted on to a virgin subject; but Dr. Tom Robinson has recorded one case in which a boy who occasionally put on a cloth cap belonging to a playmate who suffered from Alopecia Areata was attacked by the disease soon after.

The precise nature of the parasite is even unsettled, for while Gruby first described it as consisting of a mass of mycelium threads and spores, which received the title of *Microsporon Audouini*, and Melassez and Eichorst as consisting of spores without filaments, Thin attributes morbific potency to a much more minute agent which he has named the *Bacterium decalvens*.

I have only twice, out of an uncertain but considerable number of cases examined, been able to demonstrate the presence of a fungoid growth round the hair-roots which resembled the *Microsporon Audouini* as figured by Bazin; but I have not yet examined with high power for Thin's Bacterium. It may be suggested that one or both of these parasites are found in a few cases, merely because the tissues, already atrophied and altered, afford the soil appropriate to their growth, they being non-pathogenic, and unable to live upon healthy normal tissues, but for the occasional instances of contagion which have been recorded.

So many cases, however, have been examined by most careful observers without any parasite being detected, that the question must still be considered as remaining undecided.

Assuming the correctness of the parasitic origin, the phenomena of this disease would certainly be unique, and quite unlike those of any other parasitic disease. There is neither congestion nor any accumulated *débris* of the tissues, one or both of which are an invariable accompaniment of every other parasitic skin disease with which we are familiar.

Alopecia Areata may consist of only one small patch, the size of a sixpence, and remain without enlarging, or it may enlarge centrifugally, and unite with other similar areas, until the entire scalp is denuded of hair. In the worst cases, not only the scalp hair, but the eyebrows and eyelashes, the beard, and all the hairy parts of the body are involved. The baldness thus produced may remain for months, years, or even a lifetime, but spontaneous recovery may commence at any time. Sometimes a fine lanugo begins to grow, or fine, white, or faintly coloured, weak hairs cover the surface. These in due course are shed, and are replaced by a growth of normal hair.

No age is exempt from this disfiguring complaint, and it is not likely to be mistaken for any other form of baldness, that of senility having no abrupt line of demarcation, and that which results from any of the parasites about to be described bearing abundant evidence of its nature in the surrounding parts, where hair destruction is yet incomplete.

As regards treatment, we can never promise either a certain or a rapid cure. The dormant trophic functions of the bald area should be patiently and persistently stimulated by daily shampooing, the continuous current, inunction with a mildly irritating ointment, or even by blistering (M'Call Anderson), while nervine tonics, sea-bathing, and outdoor exercise should be prescribed. The subcutaneous injection of pilocarpine has been recommended; but Schwimmer, after careful trial, has found it quite inoperative.

CHAPTER VIII.

PARASITES—ANIMAL AND VEGETABLE.

THIS division includes all those gross parasites which have not been already described under that of the pathogenic bacteria, and which are recognisable by the unaided eye or by low powers of the microscope. They are not exclusively found in early life, but, as a rule, the tender, immature, easily excited young skin suffers more severely than that of the adult from the ravages of parasites.

General cleanliness commonly suffices to keep them out of well-to-do households, but it is a mistake to suppose that the most scrupulous care can render any person invulnerable. Parasites are no respecters of persons, and, although people of refined habits are naturally disgusted by their presence, there is nothing of which to be ashamed in such accidental invasion. No doubt those of foul and slovenly habits thereby offer a special invitation to these unwelcome guests, but they find their way all too frequently, unasked, to those who take every possible precaution to avoid them.

Professional workers amongst the sick poor, for example, much more frequently receive souvenirs of this description than gratitude for gratis services rendered. And so long as so large a section of the population persist in cultivating them, their more scrupulous neighbours will remain liable to invasion.

A complete list of the Animal Parasites which affect the human skin is pretty formidable, including as it does three distinct species of **Pediculi,** or **Lice**; the **Acarus Scabiei,** or **Itch Mite**; the **Demodex Folliculorum Hominis**; the **Leptus Autumnalis,** or **Harvest Mite**; the **Cimex Lectularius,** or **Common Bug**; the **Pulex Irritans,** or **Common Flea**; the **Pulex Penetrans,** or **Chigoe**; the **Filaria Medinensis,** or **Guinea Worm**; the **Filaria Sanguinis Hominis**; the **Ixodes Picinus,** or **Tick**; the **Culex Pipiens,** or **Gnat**; the **Simul Pertinax,** or **Mosquito**; besides various **Tabanidæ,** or **Gadflies,** and **Muscidæ,** the **Cysticercus Cellulosæ Cutis,** the **Echinococcus Cutis,** and the **Oxyuris Vermicularis.** Several of these are, however, extremely rare, and others occur only abroad, so that our attention should be chiefly directed to those which are common and indigenous to this country.

There are three species of **Pediculinæ**—the **Head Louse,** the **Body** or **Clothes Louse,** and the **Pubic** or **Crab Louse.** They are wingless insects, possessing a head, thorax and abdomen; they have eyes, antennæ, and a sharp-cutting proboscis, and three jointed legs on each side of the thorax, each armed with a sharp claw. The Head Louse is from 1 to 2 mm. in length, and is semi-transparent, of a gray colour amongst white races, but is yellow on the Mongol, and black on the negro. The female lays about fifty eggs, which hatch in six days, and the young begin to propagate three weeks afterwards. It is thus evident how rapidly a colony increases if left undisturbed. The eggs are enclosed in little capsules, which are attached like birds' nests to the hairs. These "nits" are just visible to the naked eye, and may be distinguished from dandriff scales by the fact that they cling to the hair, though readily made to slide up and down it. The Pediculi feed by puncturing and sucking the skin of the scalp, causing severe irritation. This is usually intensified by scratching, and Eczema results; crusts form, matting the hair into a foul mass, amidst which the lice swarm and luxuriate. This loathsome disease is nowadays much less frequent amongst well-to-do, civilized people than it was a century or more ago. English fashions of long ago were a direct encouragement to it, and cleanliness was quite ignored. In the early Georgian era, ladies' hair was wont to be manufactured into a grotesque erection, plastered with grease, dusted with powder, and spliced to supports to make it retain its monstrous proportions. Once dressed, the erection was commonly left untouched for days, weeks, or even longer, provided my lady could continue to endure the attacks of her guests. Cases of this sort appear to have been far from infrequent, and it is one of the legitimate triumphs of Fashion that high-born personages would at her bidding cheerfully endure this disgusting condition with well-bred complacency.

At present "toupees" and their too common inhabitants are alike unfashionable, but it might be rash to predict that they may never "come in" again. Meanwhile, fortunately, more æsthetic and cleanly customs prevail, and if by accident lice do sometimes find a home on a well-to-do person, they are promptly recognised and eradicated. Such untoward accidents do, however, occur occasionally, and I have more than once met with such in people who were alike incredulous and indignant when the nature of their malady was explained to them. An idea was once prevalent, and still lingers, that some persons breed lice spontaneously, but it is hardly necessary to contradict so absurd a fallacy.

To eradicate a colony of lice requires some perseverance, if the hair has got matted and the scalp is eczematous. The head should be washed every night with hot water and terebene, or carbolic acid soap, a thick lather being allowed to remain on for ten minutes. After washing this off, the hair near the scalp should be soaked in equal parts of glycerine and solution of corrosive sublimate, gr. j. to ℥j., and a close-fitting nightcap applied all night. In the morning the head should be again washed and dried, and borax ointment rubbed into the irritated scalp. A few days of this treatment usually suffices to exterminate the colony, but the Eczema may survive its exciting cause, and require appropriate treatment before it finally disappears.

Occasionally we meet with Pediculi in conjunction with one or other of the vegetable parasites about to be described, in which case we should get rid of the lice first.

The second species, **Pediculus Vestimenti** ve

Corporis, is nearly twice the size of the Head Louse, and, as its name implies, takes up its residence in clothing or bedding, only leaving its retreat to make periodical forays upon the skin of its host. Its eggs are not attached to the hair of the host, but to the fibres of the clothing. The bite and subsequent suction of this parasite give rise to Erythema and Urticaria, and the suffering which results, especially to the very young and to old, bed-ridden, pruritic patients, is very considerable. It is, indeed, amazing to see how much suffering arising from this cause will be stolidly endured by the unwashed poor without any effort being made to get rid of the plague.

An interesting phenomenon, which may serve to confirm a doubtful diagnosis of the presence of lice, are the Maculæ Cerulæ, or *taches ombrées*, steel-grey spots one-third of an inch in diameter, which fade but slightly on pressure, and occur on the skin where lice are wont to pasture.

Duguet, in 1882, ascribed these to the evacuation of the secretion of the salivary glands of the Pediculus under the epidermis. It is probable that it is this same secretion which causes the violent itching and Erythema which follow the bite.

It has been repeatedly asserted, and believed, that lice might be developed subcutaneously, being bred from the patient's blood or tissues, the title of Phthiriasis being given to this mythical dyscrasia. In order to test the possibility of Pediculi forming subcutaneous colonies, even when imported, Professor Geber tried repeated experiments by introducing live lice into the cavities of recently opened abscesses, which invariably resulted in the early death of these hapless victims of heartless scientific research.

The parasites are readily eradicated by strict cleanliness, and by boiling, steaming, or baking all the patient's clothes and bedding. To be effective, the purification must be thorough.

Infants and children, though often cruelly afflicted by the two species just described, are happily free from the attacks of the third species—the **Pediculus Pubis**, or **Crab Louse**—which appears to be able to exist only in the shelter of the short hairs which grow upon various parts at puberty.

The pubes and perinæum are its favourite habitat, but it thrives well under the armpits, upon bearded faces, and wherever it can find its own particular cover of short hair. It is never found on the scalp. The Crab Louse is broader and flatter than the two preceding; it is of a reddish-brown colour, and its two posterior pairs of legs are armed with nipper claws like a crab, by means of which it clings tenaciously to the skin, when it is tried to remove it. It adheres like a limpet, anchored to its host, and makes no attempt to escape when disturbed. When not adherent its movements are very slow, much more so than those of the preceding species, which seek safety in agility. The Crab Louse attaches its eggs to the hairs, close to the surface of the skin. Its ravages cause great irritation. The free application of mercurial ointment, followed by hot baths, will eradicate the whole loathsome colony in a few days.

The next parasite that we have to consider is the **Acarus Scabiei**, or **Itch Mite.** This minute pest is ovoid in shape, concave underneath, convex on the back; it is glistening, semi-transparent; its surface is covered with prickles and hairs, and it is armed with a powerful pair of mandibles, which it employs for burrowing into the skin. It appears to be specially constructed to provoke a maximum of irritation, its long bristles not seeming to serve any other purpose. The whole life history and metamorphoses of this insect have been carefully observed, but it is unnecessary to describe them here. Suffice it that the rate of reproduction is so rapid that if placed under favourable conditions a single pair may produce a colony of a quarter of a million in three months' time. It is to be hoped that other influences operate to put a check upon this terrible increase. The Acarus is just visible to the naked eye, and it is only comparatively recently that the parasitic nature of the disease which it provokes was recognised. It occasionally wanders over the surface of its host, or on to clothes, books, gloves, etc., whence it may be readily transferred to another person; but it is chiefly occupied in burrowing long tunnels through the epidermis, feeding on the tissues or fluids, the female laying her five-and-twenty eggs occasionally in her track.

These burrows are sometimes visible on careful examination as fine red lines running under the epidermis, but many cases exhibit them only indistinctly. When found, the diagnosis is certain, but the clinical picture is often very complete without them. The affected area exhibits minute vesicles, pustules, and nodules, with a marked roughness of surface, and numerous scratches caused by the patient's nails. Frequently we find large flakes of epidermis peeling off the fingers and palms, leaving irregular red areas, which are very characteristic of the disease.

The interdigital spaces, the flexor aspect of the forearm, the mammary region, abdomen, and genitals are the commonest sites, but I have occasionally seen cases in which the whole body, with the exception of the head, was more or less invaded. The warmth of bed appears always to increase the activity of the Acari, and the irritation caused by them becomes proportionately severe. But different persons suffer very varying degrees of discomfort from their presence, which probably accounts for the comparative indifference to them which some of the lower orders exhibit. Infants and children, however, usually suffer severely, and tear at the skin with their nails until the surface is lacerated and inflamed. In those who are prone to Eczema, Scabies will to a certainty induce an attack, which may far outstrip the exciting cause in duration.

Scabies does not tend to spontaneous recovery, although it is possible that the body becomes in time more tolerant of the irritation. I have already referred to one case of a man, aged twenty-three, who had had it as long as he could remember anything, and who had expended no little money upon various "blood purifiers" and other quackeries, with just such results as might have been expected. The Acari are easily killed, but it is by no means easy to guarantee that all have been got at, for truant ones often wander at large, and so escape the general massacre, returning to rekindle the disease just when the cure had been confidently declared to be complete. It is necessary, then, to caution the patient that relapses are exceedingly liable to occur. If, however, these are treated promptly, the colony has no time to multiply, and the last are eventually stamped out. It is not known exactly how long the Acarus can live away from its feeding-ground, but it appears to remain dormant in clothing, etc., for quite long periods.

The surest mode of treatment, then, is to fumigate or bake all the patient's clothes and bedding simultaneously with the cleansing of the skin itself. There are numberless remedies for the latter, all more or less efficacious, but we should avoid those which are of themselves likely to irritate the skin or aggravate existing Eczema. Especially in the case of infants and children should we be careful not to use powerful detergents.

The affected regions should be thoroughly washed with hot water and Wright's coal-tar soap or terebene soap, to remove as much as possible of the shedding epidermis and *débris*. They should then be well dried, and after ten minutes rubbed all over with liquid styrax or balsam of Peru. If any moisture or perspiration remain on the part, the application will not adhere. A cheap and homely remedy is common paraffin-oil, and amongst the many that have been recommended may be mentioned: Sulphur ointment, liq. calcis chloratæ, diluted with three times its quantity of water, the oils of lavender, stavesacre, cade, rosemary, etc. In cases which involve most of the body it is better, where the necessary apparatus is available, to give two or three sulphur vapour baths. Whatever remedy is applied for Scabies should be thoroughly used, notwithstanding the temporary discomfort and mess, as no sacrifice could be too great to get rid of such a disgusting disease.

After several daily dressings with any of the above we may reasonably conclude that the mature colony is extinct, but in case any of the unhatched eggs have run the gauntlet of the parasiticide, it should be repeated every few days for at least three weeks. We must then apply our treatment to the Eczema, which in many cases has been lit up, and which remains as a sequel. Not a few cases of old and obstinate Eczema have come under my notice, which had been unsuccessfully treated, in consequence of the exciting cause—Scabies—not having been diagnosed.

Some cases, however, are so masked as to deceive even a practical eye, especially when occurring in patients whose social position and habits render the presence of such a disease highly improbable.

The Acarus known as the **Demodex Folliculorum**, which lives head downwards in the sebaceous follicles, and may be found by expressing comedones, is a very innocent parasite, compared to the last; but I think that we may perhaps overlook its possible capacity for mischief. The death and putrefaction of the parasite within a follicle can hardly fail to be toxic, and it is more than likely that some cases at least of perifollicular inflammation and suppuration originate from this cause. While alive, however, they appear to do no harm, the host being generally unaware of their presence. They are comparatively common for some years after puberty, less so at other times of life; but except for the reason given above, they are of no clinical importance.

The **Leptus Autumnalis**, or **Harvest Mite**, is comparatively common in autumn fields and woods. It is a minute red insect, which preys upon the skin, as opportunity offers, and causes intense irritation. A menthol cone, rubbed over the itching surface, is sufficient to destroy the insect and allay the pruritus. Carbolic soap has a like effect.

The **Acarus Hordei**, or **Barley Mite**, produces effects similar to but much more severe than the last, for since its eggs may be deposited in the epidermis, acute localized inflammation is apt to be excited by the larvæ.

The **Cimex Lectularius**, or **Common Bug**, is a wingless, oval, ruddy-brown insect, with powerful mandibles for tearing the skin. It has a disgusting odour, and is very agile; it possesses a keen sense of smell, which it employs to seek its victims in the dark, and the effects of its bite are often very severe. For, not content with biting and sucking the skin, it ejects a highly poisonous saliva into the wound, causing immediate hyperæmia and exudation, which of course supplies the parasite with lavish nourishment. The after-effects are Œdema, Urticaria, and Erythema, varying in intensity according to the susceptibility of the patient. When Bugs have once found a lodgment in the crevices of walls, furniture, or floors, it requires very thorough exploration and use of insecticides to get rid of them. Keating's insecticide is efficacious, and has the advantage of being inodorous; but sometimes floors require to be swilled with a ten-per-cent. solution of carbolic acid, used hot, and the inside woodwork to be entirely destroyed and replaced, before these pests can be exterminated. So long, however, as the majority of mankind is too lazy to take the necessary trouble, there is small hope of this noxious insect being stamped out. It is at least a consolation that we in this country are much less exposed to its attack than the dwellers in Southern Europe.

Treatment.—Rags dipped in hazeline, containing 10% each of carbolic acid and tincture of lavender, rapidly allay the effects of bug-bites.

The **Pulex Irritans**, or **Common Flea**, is another pest for which we are too often indebted to the lazy indifference of our neighbours. Its bite causes large weals of Urticaria in delicate skins. Painting the recent bite with collodion, or eau de Cologne, containing a drop or two of carbolic acid to a drachm, checks the swelling, and subdues the pruritus. The lotion recommended for bug-bite is equally efficacious. It is hardly necessary, in this place, to describe the exotic **Pulex Penetrans, Chigoe** or **Jigger,** of the West Indian and African coasts, which, by actually entering the skin, laying its eggs, and occasionally dying and decomposing therein, causes violent pain, inflammation, deep abscess, and even gangrene.

Several species of **Ixodes,** or **Tick,** occasionally fasten on to the human skin, although they are much more common on the dog. Inserting their long serrated proboscis, they remain firmly anchored to the skin, and so gorge themselves with blood as to swell to several times their original size.

If forcibly removed, the inserted portion of the parasite is nearly certain to be broken off, and the remnant to induce severe local irritation, from the products of its decomposition. The better plan is to paint the animal with carbolized oil, or collodion, or tincture of benzoin, which quickly causes it to retract the proboscis, and to drop off dead.

Various gnats, midges, and flies cause great annoyance by pasturing upon the human skin; a curious fact when we consider that many of them are found in places far remote from human habitation, where myriads must complete their short existence without ever meeting with a human being. Any ointment or lotion prepared with one of the fragrant essential oils renders the face and hands less liable to their attacks, but their pertinacity often triumphs over all such devices. The *bites* of insects must not be confounded with the *stings* of hornets, bees, or wasps, which are actually poisoned wounds; and which, if multiple, may cause an amount of suffering and shock quite alarming in character.

A strong solution of cocaine may be applied to the sites of the stings; or, if no anodyne be available, a solution of common baking soda—the bicarbonate—or of ammonia, will give a certain amount of relief.

The **Filariæ** and other parasites mentioned need not be described at length, as some are not indigenous to, and others are at most extremely rare, in this country. Moreover, children are even less likely than adults to be attacked by them. Nevertheless, it may be as well to note that the threadworm, **Oxyuris Vermicularis**, which is by no means uncommon, may emerge from the anus, and deposit eggs on the perinæum or the vulva of dirty, uncared-for children, the result being the establishment of a severe eczema.

Vegetable parasites which affect the human skin and hair are, with but one exception, particularly partial to those of infants and children, and form diseases which are highly contagious, tedious to treat, and give rise to no little disfigurement, temporarily and even permanently. The group includes the **Trichophyton**, which is commonly spoken of as Ringworm—a most misleading title, but one which is too familiar to be conveniently discarded. There are three distinct species of these fungi, viz., the **Dermatomycosis Achorina, Achorion Schönleinii,** or Tinea Favosa, generally known as **Favus**; the **Dermatomycosis Trichophytina,** which, according to its site, gives rise to the varieties Tinea Tonsurans, T. Circinatus, and T. Sycosis; and the **D. Furfuracea,** or **Microsporon Furfur,** which is also known as Tinea Versicolor. Perhaps a fourth should be added, the **Microsporon Audouini,** already referred to under the subject of Alopecia Areata.

It was only so recently as 1839 that Schönlein first demonstrated the vegetable nature of Favus; and it was five years later before Gruby, in Paris, discovered the same regarding the other Tineæ. There soon ensued much controversy concerning the unity or plurality of the different varieties, and as to the phenomena of their development; and divers names were invented by different observers, which certainly did not tend to simplify the subject.

The first of these, **Tinea Favosa,** grows on the scalp, forming rounded umbilicated spots, of a *sulphur-yellow colour.* The initial lesion is a group of small vesicles, closely followed by the appearance of little yellow cups, each of them centred by a hair, which it embraces. The hair-shaft soon breaks off short, being riddled through and through with the invading fungus; and the *scutula,* or cups, growing centrifugally, meet and coalesce, forming thick felted cakes, which presently lose their yellow colour, and become dirty gray. These cake-masses are easily detached, and carry the stumps of the hairs along with them; they consist of a dense plexus of mycelium and spores, mixed with sebum and shed epidermal scales. Besides infiltrating the hair-shafts, the fungus dives to the very bottom of the hair follicles, and even pierces their walls; and if suppuration be thereby excited, as is commonly the case, the *papillæ* are destroyed, and permanent baldness of the affected area results.

As can well be imagined, suppuration materially increases the loathsomeness of the disease. Favus is, however, not confined to the scalp, but may invade any part of the body; and is especially liable to attach itself to the nail-bed, causing destruction of the horny nail.

Cornil and Ranvier state that indeterminate forms of cocci and bacteria are plentiful on the Favus crust. This I have amply confirmed. The disease is always the result of transplantation from another affected subject; it cannot arise *de novo*, nor be bred from anything but itself. But the possible sources of contagion are numerous. The common mouse is often affected by it, so that handling a well-used mouse-trap may cause infection. Cats also are subject to Favus, probably being infected by mice, and may convey the disease to children or others who handle them. Dogs, rabbits, and fowls (Gerlach) may suffer. So that if this horrid parasite does make its appearance in the nursery, we must at once disabuse the mind of parents as to its being necessarily caused by neglect or dirty habits on the part of the nurse or other domestics. A typical case of Favus is not likely to be mistaken for anything else; but if pustular Eczema has been excited by it, the phenomena of the latter may cause the former disease to be overlooked. It is, therefore, always desirable in severe cases of Impetigo, or pustular Eczema of the scalp, to search for broken off hair-stumps, and to remove a few sample hair-roots, examining them under a low power—250 diameters—after soaking for a minute in liquor potassæ, a drop being applied to the glass slide, and touching the hair-root on it. The absence of the swarms of spores and threads, which mark the presence of one or other species of parasite, will set any doubts upon this point at rest. If spores are visible, but no cups can be detected after careful search, the case is most likely one of the next species to be described—the Trichophyton.

Treatment of Favus has been the subject of much dispute; and no matter what plan is adopted the cure is always protracted, and relapses are disappointingly frequent.

Many have sought to eradicate the fungus without resorting to the tedious, and not altogether painless, proceeding of pulling out the hair—*depilation;* but it certainly offers the best chance of rapid and complete extirpation. Each diseased hair-root acts as a plug, so as to obstruct the passage of any ointment or lotion into the follicle, which is always infiltrated to the very bottom with the fungus: by withdrawing the hair-root, therefore, we certainly give our parasiticide a far better opportunity of entering the now empty and open follicle. Besides, since a hair once attacked is irredeemably destroyed, there is nothing to be gained by prolonging its diseased existence. The whole head should be cropped pretty close, even in cases of very limited area, and the crusts removed by poultices, made with a five per cent. solution of carbolic acid. Some olive-oil or simple ointment may be applied before the poultice, to soften the crusts. The poulticing should be renewed every few hours until the scalp appears shiny-red and clean. [The poultices and all that comes off the head should at once be burned in a bright fire, and on no account be got rid of in any other way.] The part must next be anointed with carbolized oil overnight, an oilskin nightcap being worn to keep the bedding clean and free from contagion. Depilation should then be begun by means of broad-pointed forceps; our efforts being concentrated on one spot until we have quite cleared it. The size of each spot will of course vary, as some patients are more tolerant than others. Having cleared as much as we can, the head should be well washed with soap and hot water, and the parasiticide selected should be specially rubbed into the depilated area by means of a small sponge tied to a short stick. Carbolized oil may then be reapplied over the remaining surface. This process should be repeated daily if possible, or at the most frequent convenient periods, until the whole of the affected surface has been cleared of hair. Although this process takes weeks, and even months, to carry out, it is after all shorter than any method which leaves the hairs untouched. Allan Jamieson, however, claims to have effected a rapid cure without depilation in several cases, by the use of a paste composed of two drachms each of starch, zinc oxide, vaseline, and lanoline, with a drachm to a drachm and a half of resorcin.

One of the surest parasitic remedies is corrosive sublimate, which should be applied in the proportion of two grains to four drachms of water, and four of glycerine. If this does not irritate the scalp, the proportion of the perchloride may be raised to even four grains. This should be patiently pressed in to the newly depilated area at each sitting, as well as into those already cleared.

It is not always easy to know when to leave off removing the hairs; but, speaking generally, we may say that it is only when no more broken, twisted, stubby hairs are to be found. When the fungus is eradicated in any particular follicle, the new hair which grows up from the papilla—provided the latter has not been destroyed by the fungus—is normal in appearance, and is firmly planted, so that much greater force is requisite to extract it than a diseased hair. By carefully watching the new crop of hair for any signs of Favus reappearing, we can stamp out the later efforts as they arise. This mode of treating Favus, if persevered in, ought to be successful within six months; but carelessness or inattention will be sure to prolong the disease indefinitely. It never dies out spontaneously. One case, indeed, is recorded in which it spread over the body, invaded the stomach and intestines, and ended fatally. The general nutrition of children with Favus often requires attention, and cod-liver oil, iron, hypophosphites, etc., are indicated. It is, fortunately, not a common disease in this country.

The fungus of **Trichophyton** displays under the microscope characters very similar to the last, but the spores are only about half the size. Still, unless we have an opportunity to compare the two side by side, or are very familiar with the microscope we employ, it would be rash to identify either by this means alone. But the clinical phenomena are so widely different that it would be difficult to make an error in diagnosis, unless, indeed, in the very earliest stage, when vesicles alone had appeared—a condition concerning which we are seldom consulted.

Tinea Tonsurans (Trichophyton) first gives rise to one or more small spots of closely aggregated minute vesicles and papules, seated on the scalp. Growing centrifugally, these leave the spot where they began, and form an ever-expanding ring, which encloses a diseased area.

Nowhere are any yellow cups or crusts to be found, as in Favus; but, as in that disease, we find the hairs at the margin split at the ends, lustreless, and brittle, breaking off spontaneously, and leaving twisted little stumps, which look as if they had been gnawed off. Inside the ring the area has a dirty gray colour, and is covered with a felted mass consisting of broken hairs, epidermal *débris*, sebum, and the mycelium of the fungus. This, however, never grows into the elevated cake of Favus, but remains very slightly raised, and resembles the fur of a drowned mouse. The scalp, however, may become irritated and inflamed, and we have either swollen nodules and pustules, or a general eczema of the scalp, or all combined. The eczema may be started by a very small patch of Tinea in a predisposed subject, and attain such proportions as to lead all but a very careful observer to a wrong diagnosis of the primary lesion.

It is not uncommon, moreover, in hospital practice to find Impetigo, Eczema, Tinea, and Pediculi upon the same subject.

While Favus may outlast childhood and youth, and even persist indefinitely, Tinea Tonsurans is very rare after puberty, or in the adult; although, strangely enough, the fungus has no objection to grow on any other part of the adult body. Thus, while the Trichophyton will grow upon either the scalp or body of a child, it will grow readily upon the body or beard of an adult, but only very rarely upon the scalp. When developed on the body it is termed **Tinea Circinata**; when on the adult male cheeks and chin, **T. Sycosis.**

T. Circinata is usually much more amenable to treatment than the other two forms, as the follicles of the body-hairs are small, shallow, and afford less cover for the fungus. The nail-bed and nail may also grow the Trichophyton. Tinea Circinata is not likely to be mistaken for any other lesion, unless it be Erythema Circinatum, or some of the Syphilides; but a little care should prevent any error. The patch of Tinea is more elevated at the margin than Erythema Circinatum, it is more itchy, and its colour is rosier than that of any Syphilide which otherwise resembles it. Of course, if we succeed in demonstrating the Trichophyton, upon scales scraped from the edge, the diagnosis is certain.

Tinea Circinata is often found on the same subject as T. Tonsurans; or one member of a family may exhibit the first, and another the second variety. It is not necessary here to describe the T. Sycosis, which causes such frightful disfigurement and havoc on the adult male cheeks and chin. Some observers class it as a different species: the Microsporon Mentagraphytes. T. Circinata has been described as Eczema Marginatum—an unfortunate title, as it ignores the parasitic nature of the lesion, and gives undue prominence to the secondary eczematous symptoms. So, too, T. Tonsurans has been called Herpes Tonsurans, and when on the body, Herpes Circinatus, on account of the vesicles which characterize it, thus confounding it with a class of disease which is in every way different. It would be just as accurate to describe a vesicle resulting from the bite of a flea as Herpes Pulicis, or the bulla of a blister as Pemphigus Cantharidis. This misleading nomenclature is fortunately being abandoned by modern dermatologists.

Tinea Tonsurans may last for years, and cause total destructión of a certain number of hair follicles, but it is not so grave a disease in this respect as Favus; and some subjects appear to suffer very mildly, and to throw it off at puberty, or soon after, without its leaving any apparent permanent effects.

Treatment.—If we see a case consisting of one isolated patch, of recent growth and moderate size, it may suffice to begin by cutting the hair quite short for a clear inch round the margin. If, however, several patches are visible, or the case has been in existence for more than a few days, it is far better to have the head shaved at the outset. It is astonishing, when this is done, how often we discover other patches, whose presence, concealed by the hair, was previously unsuspected. By thus removing the cover, to which the Trichophyton clings so closely, we at once limit its field of operations, and prevent its spreading with such facility. If the scalp be inflamed and sore, shaving may be too painful, in which case the hair should be cut as close as possible. By this means we relieve the irritated scalp of the weight of the hair, and obtain a free open space for the application of remedies. Depilation is still recommended by some authorities, and theoretically it is unquestionably desirable; but, as I believe that the disease may be thoroughly eradicated without this tedious process, in an equal space of time, there is not the same necessity for it as in Favus. Moreover, the affected hairs are even more brittle in T. Tonsurans than in Favus, and commonly break off short at the surface of the scalp when touched with the forceps, or leave behind the root-sheath and bulb when extracted; so that the result is more or less the same as after shaving. After the head has been cropped or shaved, it may be necessary to oil and poultice the parts for a day, to facilitate the removal of *débris*. The scalp should be then swabbed with liquor potassæ, and after ten minutes, well shampooed with carbolic or terebene soap and hot water. A soft nail-brush should be used, to aid the cleansing, which must be thorough.

A clean, dry surface having been obtained, we may apply any one of the numerous parasiticides—the glycerine and corrosive sublimate, already mentioned, being as good as any. It does not suffice to merely paint it on, however, but it should be patiently pressed into the affected area with a small sponge tied to the end of a short stick, kept for the use of the case. A close-fitting cap—which must of course be burned as soon as the cure is complete—ought to be worn night and day during treatment.

It is most desirable that all the details of the above process should, upon the first occasion, at least, be carried out by the nurse, under the personal supervision of the physician; as the too common perfunctory manipulations are very certain to fail in effecting a cure.

The head should be shampooed and dressed every day. If the scalp is eczematous, or pustules are numerous, we may have to suspend the shampooing, and allay the inflammation by appropriate remedies; but we should be loth to suspend the parasiticide, seeing that the fungus is probably the exciting cause of all the mischief. Some cases appear to resent corrosive sublimate, in which event we must use another application. I have quite recently cured several cases by oleic acid containing 10% of osmic acid. I was led to try it from having read of its powerfully poisonous effect upon bacteria, in a series of experiments made with various chemical agents. Liniment of iodine is sometimes very efficacious;

nd Dr. Foulis, of Edinburgh, claims to have cured
he worst cases in a week by shampooing the scalp
ith turpentine, washing off the latter with carbolic
oap; and, when dry, painting on two or three coats
f tincture of iodine.

An anonymous writer in the *British Medical Journal*
ecommends painting with the clear supernatant fluid
btained after adding a drachm of calomel to an ounce
f tincture of iodine, and agitating for several days.
can confirm the efficacy of this preparation, but
ave been less fortunate than 'X.' in finding 'one or
wo applications generally sufficient.' Indeed, in
y experience, the complete extirpation of T. Ton-
urans is a question not of days, but of weeks, and
ccasionally even months, under any sort of treat-
ent; we should, therefore, be always chary of
ronouncing a cure complete until at least a month
r six weeks have passed after the discontinuance of
eatment. Relapses are very frequent, even when
very trace of the malady has disappeared; and it is
est to be on the safe side when giving an opinion as
the propriety of the patient going back to school,
r playing with other children. Amongst other
emedies may be mentioned blistering, and the
ritation caused by croton-oil—which last appears
be a needlessly painful one; napthol, creosote,
arbolic acid, thymol, siegesbeckia orientalis, nitrate
f silver, salicylic acid, the oleates of mercury and
opper, etc.—a list which might be almost in-
efinitely extended. T. Circinata may be quickly
radicated by thorough washing and painting with
dine liniment every few days.

Although we could never expect to cure Tinea by internal remedies, it is well known that all parasites thrive best upon organisms that are below par; and so we may certainly expedite its extrusion by bringing the patient up to the highest possible point of health. To this end open-air exercise, sea-bathing, and tonics should be ordered whenever circumstances permit.

Tinea Versicolor is rather a disease of adult than of early life, being rare before puberty, and, so far as I am aware, it is unknown in childhood. The phenomena which it exhibits are slightly raised itchy and scaly spots, of fawn or buff colour, which coalesce to form large patches. They are generally seated on the trunk. The skin beyond these areas exhibits small spots of the same character. The effects are never serious, it being the most innocent of parasites. It may be confounded with Leucoderma, or Pityriasis; but the presence of the fungus *Microsporon Furfur* can be demonstrated without difficulty, and settles the diagnosis. Some writers entitle this growth Pityriasis Versicolor, applying to it a name which properly belongs to an entirely distinct disorder, and so causing quite uncalled-for confusion. This disease, if it can be so called, is readily eradicated by the vigorous use of soap and water, and the application of carbolized oil, sulphurous acid, creosote, or even common paraffin.

As has already been noted, in some rare cases, spots of absolute baldness, which closely resemble Alopecia Areata, are found, on careful examination, exhibit broken hairs round the margin, which, der the microscope, are found to be infiltrated ith a fungus, the *Microsporon Audouini*. Whether is is a more or less innocent parasite, which taches itself to hairs and follicles, exhausted by a re-existing tropho-neurosis, or whether it is itself e *fons et origo mali*, producing effects indistinguishble from those caused by a tropho-neurosis, has not et been clearly demonstrated.

CHAPTER IX.

FORMULÆ AND NOTES UPON THERAPEUTIC AGENTS.

For the sake of greater convenience, the formulæ of different remedies alluded to in the foregoing pages are here collected together with various additions, so as to be easily referred to.

As, however, it would be clearly impossible to write prescriptions which should fulfil all the indications of different cases, no more is claimed for these than that they are suggestions.

Beginning, then, with the diseases described in—

CHAPTER II.

In **Ichthyosis** the following will be found suitable to render the skin more supple, after the removal of redundant scales by means of soft soap and hot water:

1. ℞ Olei Pini Pumilionis - - fl. ʒj.
Adipis Benzoini - - - ʒiij.
Lanolini - - - - ʒiv.
Misce et fiat unguentum.

In **Leioderma, Zeroderma,** and **Sclerema Neonatorum,** stimulate with :

2. ℞	Camphoræ - - - -	gr. lxxx.
	Spiritus Rectificati Olei Rosmarini -	ana m. x.
	Adipis Benzoini - - -	ʒij.
	Lanolini - - - -	℥iv.

Misce et fiat unguentum.

3. ℞	Camphoræ - - - -	gr. lx.
	Tincturæ Lavandulæ - - Liquoris Ammoniæ, Fortioris	ana fl. ʒj.
	Olei Olivæ - - - -	fl. ℥v.

Misce et fiat linimentum.

In **Vascular Nævus.**

4. ℞ Liquoris Epispastici, quantum sufficiat.

Admoveatur secundum artem.

5. ℞	Corrosivi Sublimati - -	gr. v.
	Collodii - - - -	fl. ʒj.

Misce et fiat pigmentum.

6. *Electrolysis.*

Ten or more cells of a Leclanché continuous current battery should be employed. A flat metal or carbon disc, connected with the *positive* pole, should be pressed on to the skin in the neighbourhood of the Nævus—care being taken, when the face is involved, to avoid proximity to the eyes. A fine needle connected to the *negative* pole should then be inserted into the Nævus. In about a minute, the area surrounding the needle becomes blanched, and a little froth bubbles up from the puncture. The needle should then be withdrawn, and re-inserted about one-eighth or one-sixth of an inch from the first puncture. The whole Nævus should be systematically gone over in this manner; although, if it be large, this cannot be done at one sitting. All visible vessels should be transfixed by the needle.

CHAPTER III.

Eruptive Fevers.

Baths.

7. ℞	Acidi Boracis	gr. ccxl.
	Aquæ Calidæ (F. 90°-95°)	Cj.
	Solve.	
8. ℞	Sodæ Bicarbonatis	gr. ccxl.
	Aquæ Calidæ (F. 90°-95°)	Cj.
	Solve.	

Ointments.

9. ℞ Unguentum Boracis, B. P.

10. ℞	Olei "Sanitas"	fl. ℥j.
	Adipis Benzoini	ʒiij.
	Lanolini	℥iv.
	Misce et fiat unguentum.	

Formula 1 is also useful in this connection.

Fluid Inhalations.—(1) *Atomized.*

11. ℞	Acidi Lactici	m. xxiv.
	Aquæ	fl. ℥j.
12. ℞	Acidi Carbolici	m. xxiv.
	Aquæ	fl. ʒj.

(2) *Steam.*

13. ℞	Olei Pini Pumilionis	fl. ℥ij.
	Tincturæ Benzoini Compositæ	fl. ℥vj.
	Misce.	

One teaspoonful in one pint of water at F. 150°, the steam to be inhaled. Dr. Spencer Thomson's simple steam inhaler is useful for children.

Mixtures.

It may not be out of place here to remind the reader of a simple method of calculating the proper average dose proportionate to the age of the little patient. Young's method is thus expressed: "For children under twelve the doses of most medicines must be diminished in the proportion of the age to the age increased by 12." So, starting with 1 as the unit of a dose suitable for an adult, that for a child should be thus calculated:

For one year old $\frac{1}{1 + 12} = \frac{1}{13}$ of an average adult dose.
For two years old $\frac{2}{2 + 12} = \frac{1}{7}$ „ „ „ „
For three years old $\frac{3}{3 + 12} = \frac{1}{5}$ „ „ „ „
For four years old $\frac{4}{4 + 12} = \frac{1}{4}$ „ „ „ „
For six years old $\frac{6}{6 + 12} = \frac{1}{3}$ „ „ „ „
For twelve years old $\frac{12}{12 + 12} = \frac{1}{2}$ „ „ „ „

It must be understood, then, that the following internal remedies are on the scale of the adult unit, and *must be reduced according to the above table in proportion to the age of the patient.*

14. ℞ Tincturæ Aconiti - - m. j.

To be given in water every ten minutes for two hours, and afterwards hourly, or at longer intervals according to the indications, for twenty-four hours; to lower the pulse and temperature in the early stages of fevers.

15. ℞	"Antipyrin"	gr. x.
	Syrupi Aurantii	fl. ʒj.
	Aquæ	fl. ʒvii.

Solve.

To be given every hour for three hours, and afterwards every three hours for twelve hours or longer, until febrile symptoms have diminished.

16. ℞	Acidi Hydrobromici	m. xxx.
	Quiniæ Sulphatis	gr. iii.
	Aquam	ad. fl. ℥j.

Solve.

To be given every two to four hours during fever; every six to eight hours during convalescence.

White Saline Purgative.

17. ℞	Magnesiæ Sulphatis	ʒj. v.-ij.
	Magnesiæ Carbonatis	gr. xv.
	Syrupi Zingiberis	fl. ʒj.
	Aquam Menthæ Piperitæ	ad fl. ℥j.

Solve.

To be largely diluted when taken.

Diaphoretic.

18. ℞	Liquoris Ammoniæ Acetatis	fl. ʒiv.
	Vini Ipecacuanhæ	m. x.-xxx.
	Syrupi Limonis	fl. ʒj.
	Aquam	ad fl. ℥j.

Misce.

To be taken diluted every four to six hours.

Variola, *To prevent the pitting of.*

19. ℞ Corrosivi Sublimati - - gr. j.
Colodii Flexilis - - - fl. ℥j.
Misce et fiat pigmentum.

Erysipelas, *Preparations of Iron useful in.*

20. ℞ Tincturæ Ferri Perchloridi, B. P. m. x.-xxx.
To be taken in water every six hours.

21. ℞ Misturæ Ferri Aromaticæ, B. P. fl. ℥j-ij.
To be taken diluted every six hours.

22. ℞ Ferri Carbonatis Saccharatæ gr. x.
Aquæ - - - - fl. ℥j.
Solve.
To be taken diluted every six hours.

CHAPTER IV.

CHRONIC NON-FEBRILE BACTERIAL DISEASES.

In **Impetigo** and **Pemphigus Contagiosus.**

23. ℞ Corrosivi Sublimati - - gr. j.
Adipis Benzoini }
Lanolini - } - - ana ʒiv.
Misce et fiat unguentum.

Apply after poulticing or washing off the crusts of the one, and drawing off the serum of the other, taking care not to spread the infective material over neighbouring parts.

In **Lupus.**

24. ℞ Corrosivi Sublimati - - gr. j.
Lanolini - - - - ʒj.
Misce bene.

Apply on cotton wadding, as a plug after excision of nodule (*vide* p. 45).

25. ℞	Corrosivi Sublimati	gr. j.
	Aquæ Destillatæ	℥ij.

Solve.

As a subcutaneous injection in lupous areas, or as a dressing.

Plaster Mull—"Unna."

26. ℞	Acidi Salicylici	gr. xlviij.
	Creasoti Puri	gr. xcvj.
	Aluminium Oleatis	ad ℥j.

Misce bene.

The above appears to be the formula of a given strength (10% salicylic acid); but for some not very apparent reason, the proportions are not stated at so much per cent., or per ounce, of the vehicle, but at so much per *mètre* of the plaster. The composition is spread on thin gutta-percha, and faced with coarse, open muslin. The plaster, of various strengths, may be had from Martindale.

In Scrofuloderma.

27. ℞ Iodoformi, vel Iodol, quantum sufficiat.

To be sprinkled on the affected surface.

Also Formulæ 23, 24, 25.

28. ℞	Syrupi Ferri Iodidi	fl. ʒj.
	Aquam	ad fl. ℥j.

Misce.

To be taken three times a day.

29. ℞ Syrupi Hypophosphitis Com-
positi (Fellow's) - - fl. ʒj.
Aquæ - - - - - fl. ℥j.
To be taken three times a day.

Syphilis.—It is seldom indeed that we are called on to treat primary cases in the very young. The following are, therefore, appropriate for the constitutional manifestations such as are commonly met with in infancy and early life.

30. ℞ Corrosivi Sublimati - - gr. $\frac{1}{20}$.
Potassii Iodidi - - - gr. v.-x.
Aquæ - - - - - fl. ℥j.
Solve.
To be taken twice or three times a day.

31. ℞ Pulveris Hydrargyri cum Cretâ gr. v.-x.
To be taken every night at bedtime.

32. ℞ Sodii Iodidi - - - gr. x.-xv.
Spiritus Ammoniæ Aromatici m. xx.
Aquam - - - - ad fl. ℥j.
Solve.
To be taken twice or three times a day.

Donovan's Solution.

33. ℞ Arsenici et Hydrargyri Hy-
driodatis Liquoris - - m. x.-xx.
Aquam - - - - ad fl. ℥j.
To be taken twice daily just after food.

Although its value has been altogether denied by many eminent observers, there is reason to believe that Sarsaparilla has a markedly beneficial effect in the syphilitic cachexia. Mr. Walter Coulson, whose experience has been very extensive, speaks strongly as to its efficacy, especially in cases in which Iodine preparations are not well borne, or fail to benefit the case.

34. ℞ Extracti Sarsæ Liquidi - fl. ʒj.-ʒij.
Aquam - - - - ad ℥j.
Misce.

To be taken twice or three times a day.

Dietetics.

35. Oleum Morrhuæ cum "Maltine" (Maltine Manufacturing Co.)

One to two tablespoonfuls twice daily.

36. Vinum Extracti Carnis cum "Maltine" (Coleman).

37. Mellin's Food.

38. Benger's Food.

The above alimentary preparations are often of the utmost service in the case of children debilitated by the syphilitic cachexia.

Condylomata, Fissures, and **Ulcerations.**

39. ℞ "Resorcini" - - gr. xv.
Adipis Benzoini - - - ℥j.
Misce et fiat unguentum.

40. ℞ Unguenti Iodoformi et Eucalypti (Martindale).

Also Formula 27.

Iodol in powder, blown up the nostrils by means of an insufflator, or used as snuff, has a marked effect upon the snuffling, caused by catarrh of the naso-pharyngeal mucous membrane. It may also be applied by means of a brush to ulcers of the fauces, tongue, or buccal cavity.

CHAPTER V.

Erythemata.

41. Vinolia-cream (Roberts et Cie.).
42. Venetian Talc, as a Dusting-powder.
43. Cimolite ,, ,,

Intertrigo.

44. ℞	Sodæ Biboratis	gr. xxx.
	"Hazeline"	fl. ʒiv.
	Aquam Rosæ	ad fl. ℥j.

Misce.

Also Formulæ 25, 41, 42, 43.

Pernio (Chilblain).

45. ℞	Unguenti Iodi, B.P. Lanolini	ana ʒiv.

Misce et fiat unguentum.

46. ℞	Olei Lavandulæ	m. xx.
	Acidi Carbolici Liquidæ	m. x.
	Unguenti Zinci Oxidi	℥j.

Misce et fiat unguentum.

Paratrimma (Bed-sore). When the skin is unbroken.

47. ℞	Liquoris Plumbi Tincturæ Catechu	ana fl. ʒiv.

Fiat pigmentum.

48. ℞ "Iodol" - - - - gr. xxx.
Tincturæ Benzoini Compositæ - - - - fl. ℥j.
Misce.

Protect from pressure, and, if skin be broken, dust with Iodoform or Iodol-powder.

Progressive Hyperplastic Erythema.

49. ℞ Extracti Ergotæ Liquidæ - ʒj.
Lanolinum - - - ad ℥j.
Misce et fiat unguentum.
Also Formula 39.

Eczema (Acute). Carefully cleanse from crusts and dirt as follows:

50. ℞ Acidi Carbolici Liquidæ - m. xxiv.
Oleum Olivæ - - - ad fl. ℥j.
Misce.

Apply with soft shaving-brush. In four hours apply poultice for four hours. Remove and gently wash with super-fatted vinolia-soap and *boiled* water cooled to F. 80°-90°, containing borax or boracic acid in the proportion of fifteen grains to the ounce of fluid. Choice must then be made of one of the following lotions, dusting-powders, or ointments:

Lotions.

51. ℞ Acidi Borici - - - gr. cxx.
Tincturæ Opii - - - fl. ʒiv.
Aquam Rosæ - - - ad ℥viij.
Misce.

52. ℞ "Boroglyceride"	fl. ʒij.
Zinci Oxidi	gr. lx.
Acidi Carbolici Liquidæ	fl. ʒj.
Aquam Fervidam	ad fl. ℥viij.

Misce.

53. ℞ Acidi Hydrocyanici Dilutæ	fl. ʒj.
Extracti Hamamelidis Virginicæ Liquidæ (Hazeline)	fl. ℥ij.
Aquam Destillatam	ad fl. ℥viij.

Misce.

54. ℞ Liquoris Plumbi Subacetatis	fl. ʒj.
Zinci Oxidi	gr. lx.
Glycerinæ	fl. ʒij.
Aquam Sambuci	ad ℥x.

(Liveing). Misce.

55. ℞ Calaminæ Preparatæ	gr. ccxl.
Zinci Oxidi	gr. cxx.
Resorcini	gr. lx.
Glycerinæ	fl. ʒij.
Aquam Rosæ	ad fl. ℥viij.

Misce.

Pulveres—Dusting Powders.

56. Sanitary Rose Powder [(Boracic Acid) Woolley].
Cimolite.
Venetian Talc.

57. Kieselguhr (Martindale).

58. ℞ Camphoræ	gr. xxx.
Spiritus Vini Rectificati	m. v.
Zinci Oleatis	gr. lx.
Pulvem Amyli	ad ℥j.

Misce.

Ointments.

As a simple cooling salve the following is recommended by Dr. Allan Jameson:

59. ℞	Aquæ Rosarum Olei Amygdalæ	ana partes x.
	Ceræ Albæ Cetaceæ	ana partem j.

Misce et fiat unguentum.

60. ℞	Acidi Borici-	gr. lx.-cxx.
	Adipis Benzoini Lanolini	ana ℥iv.

Misce et fiat unguentum.

Vinolia-cream (Roberts).

61. ℞	Emplastri Plumbi	partem j.
	Vaselini	partis ij.

Liquefacte et misce.

62. ℞	"Ichthyol"	gr. v.-x.
	Adipis Benzoini Lanolini	ana ℥iv.

Misce et fiat unguentum.

63. ℞	Zinci Oleatis	gr. lx.-ccxl.
	Adipis Benzoini Lanolini	ana ℥iv.

Misce et fiat unguentum.

The above, or modifications of them, are useful in the acute stages of Eczema; but in the more chronic the following are preferable, care being taken not to over-stimulate the affected parts, especially in the case of young children.

64. ℞	Zinci Oxidi	ʒiij.
	Liquoris Plumbi Acidi Carbolici	ana ʒj.
	Oleum Olivæ	ad ℥vj.

Misce.

65. ℞	Plumbi Oxidi	gr. xv.
	Zinci Oxidi	ʒj.
	Liquoris Carbonis Detergentis	m. xxx.
	Adipis Benzoini Lanolini	ana ʒiv.

Misce et fiat unguentum.

66. ℞	Hydrargyri Ammoniati	gr. xx.
	Zinci Oleatis	gr. lx.
	Adipis Recentis Lanolini	ana ʒiv.

Misce et fiat unguentum.

67. ℞	Hydrargyri Oxidi Rubri	gr. x.
	Creasoti	fl. ʒss.
	Adipis Benzoini Lanolini	ana ʒiv.

Misce et fiat unguentum.

68. ℞	Extracti Pini Canadensis	fl. ʒij.
	Adipis Benzoini Lanolini	ana ʒiv.

Misce et fiat unguentum.

69. ℞	"Pinol"	fl. ʒij.
	Lanolini	ʒvj.

Misce et fiat unguentum.

If the affected parts be very dry, cracked, and scaly, some of the milder preparations of tar may

be cautiously tried; or even blistering with **Acetum** Cantharidis in obstinate cases.

70. ℞	Acidi Salicylici	gr. iij.
	Adipis Benzoini Lanolini	ana ʒiv.

Misce et fiat unguentum,

71. ℞	Picis Liquidæ Olei Santali Flavi	ana fl. ʒj.
	Spiritus Vini Rectificati	fl. ʒvj.

Misce et fiat unguentum.

Oleum Cadini, or Oleum Rusci, may be substituted when the odour of pitch is objected to.

72. ℞	Ichthyol	gr. x.-xv.
	Aquæ Distillatæ	q. s.
	Lanolini	℥j.

Misce et fiat unguentum.

73. ℞	Resorcini	gr. x.-xl.
	Zinci Oxidi Pulveris Amyli Vaselini Lanolini	ana ʒij.

Misce et fiat unguentum.

(Irle.)

Dr. Unna, of Hamburg, was the first to employ Ichthyol and Resorcin in the treatment of Eczema. Another and useful application suggested by Unna is:

74. ℞	Zinci Oxidi	partes x.
	Gelatinæ	partes xv.
	Glycerinæ	partes xxx.
	Aquæ	partes xl.

To these, when melted and mixed, 2% Sulpho-chthyolate of Ammonia is added. Before using, the ar or tin containing the jelly is placed in hot water, nd when liquefied the preparation is painted over the czematous surface, and covered with a thin layer of otton-wadding.

As internal remedies ferruginous tonics are often ndicated in Infantile Eczema.

75. ℞ Syrupi Ferri Phosphatis Compositæ - - - - - fl. ʒj.

76. ℞ Syrupi Ferri Quininæ et Strychninæ Phosphatis - fl. ℥j.

To be taken in water three times daily after food.

Also Formulæ 20, 21, 22.

Arsenic should never be exhibited in the acute tages of Eczema or Psoriasis; and, although of reat value in many cases, it is by no means either a niversal or an indispensable panacea.

77. ℞ Liquoris Arsenici Bromati (Ferris) - - - - - m. j.-ij.

To be taken in water thrice daily after food.

Psoriasis.—Always begin by using mild preparaions, proceeding to more stimulating ones if they il.

78. ℞ β. Napthol - - - - - fl. ʒj.
Saponis Mollis - - - ʒij.
Tincturæ Lavandulæ - - ℥j.
Spiritus Vini Rectificati - ℥iv.
Misce.

79. **℞ Acidi Pyrogallici -**
Adipis Benzoini - - -
Lanolini - - - -
Misce et fiat unguentum.

80. ℞ Acidi Salicylici - -
Creasoti - - -
Lanolini - - - - fl.
Misce et fiat unguentum.

81. ℞ Olei Cadini - - -
Adipis }
Lanolini } - - -
Misce et fiat unguentum.

If any of these be well tolerated, but the improvement slow, we may gradually increase the proportion of the active agent.

Seborrhœa.—After removal of the greasy crusts:

82. ℞	Ferri Oleatis - - -	gr. xxv.
	Adipis Benzoini } Lanolini - } - -	ana ʒiv.

Misce et fiat unguentum.

83. ℞	Pinol - - - - -	ʒiij.
	Tincturæ Lavandulæ - -	ʒiv.
	Glycerinæ - - - -	℥j.
	Extracti Hamamelidis - -	ʒij.
	Aquam - - - - -	ad ℥vj.

Misce.

Solve et fiat lotio (Bulkley).

86.	℞	Lactis Sulphuris Potassæ Carbonatis	ana ʒiv.
		Glycerinæ	℥j.
		Aquæ Colonensis	℥ij.
		Aquam Rosarum	ad ℥viij.

Solve, misce et fiat lotio.

87.	℞	Hydrargyri Perchloridi	gr. iv.
		Acidi Carbolici	fl. ʒj.
		Tincturæ Lavandulæ	fl. ʒij.
		Glycerinæ	fl. ℥j.
		Aquam	ad fl. ℥viij.

Solve et fiat lotio.

88.	℞	Sulphuris Iodidi	gr. xxx.-lx.
		Adipis Benzoini Lanolini	ana ʒiv.

Misce et fiat unguentum.

Unna's Ichthyol Soap.

CHAPTER VI.

Pruritus may be mitigated by the following:

89. ℞	Potassii Cyanidi	gr. xxx.
	Aquæ	℥viij.

Solve.

The above must not be applied to a broken surface.

90. ℞	Acidi Hydrocyanici Diluti	fl. ʒij.
	Boracis	gr. lx.-cxx.
	Vini Opii	℥j.
	Aquam	ad ℥viij.

Solve.

91. ℞	Chloralis Oleatis (Corbyn)	ana ℥iv.
	Lanolini	

Misce et fiat unguentum.

92. ℞	Cocaine Hydrochloratis	gr. x.
	Tincturæ Benzoini Compositæ	℥i.

Solve et fiat pigmentum.

93. ℞	Camphoræ	gr. xxx.
	Spiritus Vini Rectificati	m. v.
	"Menthol" vel Menthæ Piperitæ Olei	℥j.
	Lanolini	℥j.

Misce et fiat unguentum.

94. ℞	Creasoti	m. xxx.
	Extracti Conii	℥j.
	Aquæ	ʒj.
	Lanolini	℥j.

Misce et fiat unguentum.

95. ℞ Olei Staphisagriæ Menthol	ana ʒj.
Lanolini	℥j.

Misce et fiat unguentum.

The above are also serviceable applications in **Urticaria**, whether idiopathic, or resulting from the bites of animal parasites. The following, if applied soon after the infliction of a bite, prevent the subsequent distressing irritation :

96. ℞ Acidi Carbolici	m. xxx.
Collodii	℥j.

Misce et fiat pigmentum.

97. ℞ Bismuthi Albi	gr. lx.
Thymol	gr. x.
Glycerinæ	ʒj.
Aquam	ad ℥j.

Misce.

CHAPTER VII.

Acarus Scabiei.

98. ℞ Sulphuris Præcipitati	gr. xxx.
Tincturæ Lavandulæ	ʒj.
Adipis Benzoini Lanolini	ana ʒiv.

Misce et fiat unguentum.

After thorough washing with strong soap and water.

99. ℞	Liquidæ Styracis - - -	q. s.

Fiat pigmentum.

100. ℞	Ol. Olivæ - - - -	℥j.
	Sp. Vini Rect. - - -	℥ij.
	Styracis - - - -	℥j.

Misce.

Favus may be treated—after thorough cleansing of the scalp, and removal of diseased hairs—by

101. ℞	Corrosivi Sublimati - -	gr. ij-iv,
	Glycerinæ Aquæ - } - - -	ana ʒiv.

Solve.

102. ℞	Resorcini - - - -	ʒj.-℥jss.
	Zinci Oxidi Pulv. Amyli Vaselini Lanolini } - - -	ana ℥ij.

Misce et fiat unguentum.

(Allan Jameson.)

Trichophyton may be eradicated by the first of these, or :

103. ℞	Acidi Osmici - - -	gr. xij.
	Acidi Oleici - - - -	fl. ʒij.

Misce.

This is a costly but rapid remedy.

104. ℞	Calomelanos - - - -	gr. lx.
	Tincturæ Iodi - - -	fl. ʒj.

Misce.

05. ℞	Acidi Carbolici	fl. ʒj.
	Olei Terebinthinæ	fl. ℥ij.
	Linimenti Iodi	fl. ℥v.

Misce.

06. ℞	Cupri Oleatis	gr. lx.
	Adipis Benzoini	℥j.

Misce et fiat unguentum.

07. ℞	Hydrargyri Oleatis	gr. xxx.
	Adipis Benzoini	℥j.

Misce et fiat unguentum.

In conclusion, it may be well to make a few emarks about the **washing, bathing, and dressing** f children. Doubtless there are many who do ot appear to suffer in any way from mistakes, owever gross, in their hygienic habits and surroundngs; but it is none the less our duty to prevent all rovocation to disease.

Bathing.—Except for some special purpose, the hild's bath should not exceed F. 80°. It may range rom this to a much cooler temperature, but it should ever be so cold as to cause after-shivering; for, lthough the bracing effect of cold water is generally eneficial to the robust youth and adult, it acts lmost always as a depressant upon the very young.

If there be no actual disease of the skin, there is o harm in using a fragrant medicated soap, such as ucalyptus, or Austrian pine-soap—although we must ot expect impossible miracles from their use. If, however, the skin be delicate or erythematous, we must be careful to use none but *super-fatted* soap—such as Blondeau's vinolia-soap (Roberts and Co.), or that of Douglas of Hamburg. In harsh, scaly conditions of the skin, or in Seborrhœa, on the other hand, more stimulating and detergent ones may be employed, such as carbolic acid, terebene, or coal-tar soaps. These, however, will certainly be injurious to an eczematous skin, and should not be promiscuously used in the nursery, however much we may approve them for healthy adults. Very eczematously inclined skins should be cleansed by water, a pint of which has been poured, when boiling, upon a tablespoonful of oatmeal or bran, and strained after it has cooled to about F. 80°.

Sea-bathing, as a rule, is not good for delicate skins, but it may be cautiously tried if the water be warm. It is better to let children "take to the water" gradually, and of their own free will, encouraging them, if need be, but not using compulsion. Certainly no good can result from carrying a terror-stricken child into the sea, regardless of the temperature, and plunging the shivering creature into the chilly waves. Coarse towels should only be used when old and worn, never when new and hard.

Clothing.—Woollen under-garments are now made in such soft textures that there is no excuse for irritating the skin of delicate children by making them wear penitentially hirsute flannel. If even the softest wool cannot be worn with comfort, silk may be placed next the skin, and a woollen garment over it. The eat points are to distribute the weight evenly, and clothe sufficiently to obviate the effects of any dden change of temperature, while not overloadg the body, as is too often done.

The results of excessive clothing are pernicious, promoting undue perspiration; by preventing the ipour dispersing; by restraining the free muscular ovements of the child; and by increasing the iances of chafing. Children are too often reirded by fond but foolish mothers as mere lay gures upon which to exhibit their æsthetic proivities; which are only commendable when kept ibordinate to, and strictly in accord with, the rules of ygiene and common-sense.

During winter and spring, the feet especially iould be well protected against cold, and never dorned with tightly-fitting boots. A felt sole is inispensable for obviating cold and damp, and the oot should not anywhere fit so closely as to intere re with the circulation.

Neglect of these simple precautions is a fruitful ource of both chilblains and corns. Children should iot be forced to wear tight kid gloves in cold veather, but only soft woollen or silken-lined ones.

The **Diet** of children should be simple, but well ooked and appetizing; the young have a natural instinct for sweets, which should be admitted in moderaion; but butcher-meat should be but sparingly given. Except under medical sanction, stimulants should never be given to young people before they arrive at maturity, and are able to judge for themselves. Few sights are more distressing than that of a child of ten or twelve summers visibly over-excited by the wine which, whether as a treat, or through an insane idea of "strengthening" it, has been given by parents painfully oblivious of their responsible duties.

On the other hand, children from whose dietary stimulants are excluded are much less prone to develop a morbid appetite for them on arriving at maturity; and assuredly respond more satisfactorily to their exhibition when indicated during illness.

INDEX OF AUTHORITIES REFERRED TO.

ANDERSON MCCALL, 55, 79, 117, 136, 139, 144, 145, 147.
Arlt, 33.
Auspitz, 138.

BÄRENSPRUNG, VON, 145.
Bazin, 78, 146.
Biett, 83, 121.
Brown-Séquard, 76.
Browne, Lennox, 19, 45.
Bulkley, 192.

CHARCOT, 76.
Cornil (and Ranvier), 164.
Coulson, 183.
Cunningham, 102.
Curschmann, 17.

DOUTRELEPONT, 48.
Duguet, 153.

EICHORST, 146.

FOULIS, 173.
Fox Tilbury, 11, 145.

GEBER, 153.
Gerlach, 164.
Gruby, 146, 163.

HARDY, 7, 145.
Harries, 41.
Hebra, 10, 80, 83, 117, 141.
Hebra (Hans Von), 115.
Hirsch, 10.
Holinshed, 29.
Hutchinson, 52, 145.

IHLE, 190.

JAMIESON-ALLAN, 45, 117, 188, 195.
Joffroy, 76.

KAPOSI, 42, 139,
Koch, 44, 46.

LANGER, 12.
Lebert, 15.
Leloir, 7.
Lesser, 38.
Lewin, 32.
Liveing, 38, 187.
Lukomsky, 34.

MELASSEZ, 146.
Meissner, 3.
Metschnikoff, 59.

ORTH, 34.

RANVIER (and Cornil), 164.
Ringer, 75, 103.
Rittershain, Von, 96.
Robinson, 145.

SAMUEL, 76.
Schönlein, 163.
Schwimmer, 12, 76, 81, 137, 138, 148.
Shoemaker, 61.
Sydenham, 26.

THIN, 146.
Thomas, 20, 79.
Trousseau, 32.

UNNA, 3, 48, 90, 182, 190, 192.

VEIEL, 84, 121.
Velpeau, 32.
Vivier, 108.
Virchow, 46.
Volckmann, 44, 84.

WEHL, 109.
Wertheim, 108.
Wilson, Erasmus, 145.
Wunderlich, 32.

YOUNG, 179.

ZIEGLER, 10, 11.
Ziemssen, Von, 15.

THE END.

Baillière, Tindall, & Cox, 20, King William Street, Strand.